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Vol. 15 • No. 10 OCTOBER 1941

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Puget Sound Wins Oyster Suit

Federal Judge Bowen decides against Pioneer Oyster Company in suit against Puget Sound Pulp & Timber Company for alleged damages.

THE Puget Sound Pulp & Timber Company of Bellingham, Washington, has won the suit brought against it by the Pioneer Oyster Company which alleged damage by sulphite waste liquor to its oyster beds 12 miles from Bellingham and 3 to 4½ miles from Anacortes, to the extent of $1,780,000.

United States District Judge John C. Bowen of Seattle rendered his memorandum decision on September 29th in favor of the defendant company. The suit was filed February 17, 1940. Trial before Judge Bowen began in the United States District Court, Western District of Washington, Seattle, on June 3, 1941. From that date until August 12th with the exception of one week's recess, testimony was presented by both plaintiff and defendant. Oral arguments were presented September 5th and written briefs were filed with the court shortly thereafter.

It is reported on good authority that the Pioneer Oyster Company will not appeal.

As Judge Bowen's decision summarizes the major points of the 4,335 pages of testimony, and his findings of fact are of great importance to the pulp and paper industry, it is printed below in its entirety.

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
NORTHERN DIVISION

PIONEER OYSTER COMPANY,
a corporation,
Plaintiff,
vs.
PUGET SOUND PULP & TIMBER CO.,
a corporation,
Defendant.

No. Civil 8

MEMORANDUM DECISION

Filed: September 29, 1941

Lundin & Barton, Seattle, Washington,
Alfred H. Lundin, Seattle, Washington,
McMicken, Rupp & Schweppe, Seattle, Washington,
Alfred J. Schweppe, Seattle, Washington,
J. Gordon Gose, Seattle, Washington,
Attorneys for Plaintiff.

Evans, McLaren & Lane, Seattle, Washington,
Robert H. Evans, Seattle, Washington,
W. G. McLaren, Seattle, Washington,
Sather & Livesey, Bellingham, Washington,
Charles A. Sather, Bellingham, Washington,
Attorneys for Defendant.

BOWEN, District Judge:

This is an action commenced January 17, 1940, by plaintiff corporation for the benefit of itself and other associates who assigned their claims to it (plaintiff and its assignors all being hereinafter referred to as plaintiff) against the defendant pulp manufacturing company to recover damages alleged to have been caused by defendant's waste sulphite pulp liquor and waste pulp fiber to plaintiff's oysters (known as Japanese or Pacific oysters) on their beds in Padilla Bay near Anacortes, Skagit County, Washington, and for injunctive relief against similar future acts and damages.

The case being one of equitable cognizance was tried by the court without a jury. The trial consumed about 30 days, and the transcript of the trial proceedings cover about 4335 pages. In company with counsel on both sides, the trial judge during two days viewed the oysters on the beds, the defendant's Bellingham pulp mill, and other things and conditions in and about Bellingham and Padilla bays and Anacortes Harbor deemed by counsel material to the trial.

Complaint

● The issues are simple. Plaintiff claims that the discharge by defendant from its two pulp mills (one at Bellingham and one at Anacortes) of waste sulphite pulp liquor and waste pulp fiber into the tidewaters of Bellingham Bay and Anacortes Harbor has caused and continues to cause a poisonous pollution of those waters, and that this pollution has found and in increasing amounts continues to find

its way into the waters of Padilla Bay over plaintiff's oyster beds, injuring plaintiff's oysters and killing many of them, with the result that, although the oysters were in good marketable condition prior to 1938, during that year and subsequently they have become worthless except for a small transplantation value, all to plaintiff's damage in the total of $1,780,000. (The Anacortes mill was owned by the Puget Sound Pulp & Timber company until November, 1940, when it was sold to the Scott Paper Company—Editor.)

Defense

● Defendant, although admitting discharge of its waste sulphite pulp liquor into tidewater adjacent to its pulp mills, denies that plaintiff's oysters have been or will be damaged thereby, and affirmatively alleges that (1) plaintiff's action is barred by the statute of limitations; (2) that plaintiff's action is also barred by laches (negligence) because at no time before it was commenced did plaintiff or its predecessors in interest make any complaints or any claim of damage to the oysters from defendant's pulp mill operations, and during the period since plaintiff began the planting and cultivating of the oysters defendant has spent and become obligated to spend large sums of money in carrying on defendant's operations and expanding its facilities, and plaintiff should have notified defendant of any claimed damage to oysters; (3) that plaintiff has no capacity to sue for the assignors; (4) that plaintiff is not the real party in interest; and (5) that the oysters were improperly planted, cared for, cultivated and prepared for sale, and plaintiff and its associates were unable to find or provide a market for the oysters.

The defendant's pulp mills at Anacortes and Bellingham commenced regular production of pulp in 1926. The Bellingham mill shows generally an annual increase in production from 1230 tons of pulp in 1926, to a high of 100,839 tons in 1940. The Anacortes mill production has been much smaller, but it increased annually from 8,355 tons in 1926 to 16,167 tons in 1930, dropped back to 8,725 tons in 1931, produced nothing in 1932, produced 8,998 tons in 1933, and ranged from 20,487 to 27,297 tons among the years 1934-1940, except for the years 1938 and 1939. The Bellingham mill's production jumped from 47,682 in 1938 to 87,577 tons in 1939, but the Anacortes mill produced nothing in 1938 and only 6,839 tons in 1939.

Defendant's mills produce unbleached sulphite pulp and that pulp manufacturing process comprises, among other things, the 7 to 12 hours cooking of chipped pulp wood (principally hemlock) in digestors containing a solution of 2,000 gallons of cooking liquor and 30,000 gallons of fresh water per ton of pulp produced. The cooking liquor contains approximately 260 lbs. of sulphur and 342 lbs. of lime rock (per ton of pulp produced) dissolved in about 2,000 gallons of fresh water (per ton of pulp produced). After the cooking process is completed the digester liquor containing the cooked wood fiber and cooking liquor is put through washing and screening processes in which more fresh water is used and then the pulp goes to the pulp machines where it is formed into sheets and dried. The water used in the various processing operations, containing the cooking liquor, is finally discarged into the sewer and into tidewater adjacent to the mill. Also some wood fiber wasted through plant shut downs is deposited on the bottom in tidewater near the mouth of the sewer.

The Anacortes mill is 3 nautical miles from the south end Padilla oyster bed and 4½ miles from the north end beds or Lundin Tract. The Bellingham mill is 12 miles from the north end beds or Lundin Tract and 16 miles from the south end beds.

Establishment of Oyster Beds

● In 1930, R. H. Bailey and Alfred H. Lundin each had 50 boxes of Japanese oyster seed planted on their respective tide lands in the south and north ends of Padilla Bay . The results in the growth and quality of oysters produced from these initial plantings were successful, and in October, 1931, Mr. Bailey, Mr. Lundin and Mr. H. J. Waters organized the Padilla Point Oyster Company, a corporation, to further the commercial production of Japanese oysters in Padilla Bay. Mr. Bailey acquired from his brother a 943-acre tract of tide land in the south end of that Bay which he subdivided and sold in one-acre tracts to numerous persons who in turn leased their lands to and entered into oyster seed purchasing and pooling agreements with the Oyster Company for the planting, care, cultivating and marketing of oysters for the pro rata benefit of all concerned. Mr. Lundin acquired an 800-acre tract in the north end of the Bay, the planted portions of which were pooled in the same way, and some other growers have come into the pooling agreements.

The oysters involved in this action are those produced from seed planted as follows: 18,820 boxes in 1933; 47,716 boxes in 1934; 8,546 boxes in 1935 and 600 boxes planted in 1936; total boxes of seed planted in those years, 75,682. Some of these were planted on the Lundin beds in the north end of the Bay and some on the beds of the south end. The production and marketing of oysters from these plantings, either as fresh or canned oysters or canned oyster soup, progressed successfully until the fall of 1936 when marketing was halted by a longshoremen's strike which lasted until February, 1937. Then followed the nation's economic recession of that year, with the result that marketing operations for this oyster business was at a standstill for approximately a year from the fall of 1936 to near the end of 1937. Through the winter months of 1937-38, the fall of 1938 and winter of 1938-39, oyster sales from the Padilla Bay beds were confined to the fresh oyster market demand of one wholesaler. This fresh oyster market, however, was lost to Padilla oysters in 1939, because of the poor condition of the oysters and the decrease in oyster meats yield—when it was said to take too many oysters in the shell to shuck out a gallon of fresh oyster meats. The result was financial disaster to the Company and loss of its business.

In the spring of 1938, the Padilla Point Oyster Company was dissolved in the state court, some of its creditors were paid, others were given an interest in oysters and security in oyster lands, and the plaintiff corporation, a new company, was formed to and did take over the remaining assets and obligations of the dissolved corporation, including the latter's cause of action and its associates' causes of action herein sued upon and the obligation to cultivate, care for, and market the oysters under the leasing and seed pooling agreements. Since 1939, plaintiff has done very little if any selling of oysters, except about 100,000 gallons (including some sold in 1938) sold for transplanting to Similk Bay on the southwesterly side of Fidalgo Island in Skagit County, Washington, and to the B. C. Packers oyster beds in Boundary Bay, British Columbia. (This latter sale was in February, 1941—Editor.)

Mr. Bailey, the chief executive and guiding spirit of plaintiff's enterprise, testified among other things that after careful study and planning the oysters were planted and cared for in approved manner, that they grew and developed normally and yielded good merchantable products as fresh or canned oysters or soup until 1938. but that during that year the oysters became brown in color with green and yellow tinges and lost their flavor, and that thereafter plaintiff's Padilla oysters could not compete with other oysters on the market and became absolutely unmarketable. Mr. Waters, another of the most active officials in plaintiff's oyster business, supported Mr. Bailey's testimony and supplied many helpful details.

Much of the testimony concerns the methods and the results thereof for determining whether pulp liquor and pulp fiber are present in the water over plaintiff's oyster beds in sufficient quantities to injure the oysters.

Tests for Sulphite Liquor

● The parties do not agree that there is any generally accepted chemical test by which the presence of sulphite pulp liquor in sea water can be certainly determined. Plaintiff frankly says that there is no such chemical test which is reliable and its position is supported by its expert testimony. Defendant however contends that chemical tests for that purpose are reliable and in connection with this case made extensive use of one chemical test known as the Pearl-Benson colorization test by which color reflecting reagents are used to reflect the amber color of sulphite pulp liquor when it is present. And palintiff had some Pearl-Benson tests made, as its counsel say, for whatever they were worth.

Plaintiff's witness Kneisley, a commercial chemist, testified to conducting Pearl-Benson tests on water samples taken from over plaintiff's oyster beds (Tr. 2168, 2174), using sodium nitrate, acetic acid and ammonia as color reagents, and finding approximately 10 parts of liquor per million parts of water, but said its is difficult to identify waste sulphite pulp liquor when the dilution of it is as low as 25 or 35 parts of liquor per million parts of water because the substance used to identify the liquor is also present in sea water in considerable quantity.

Defendant's witness Dr. Kobe, associate professor of chemical engineering, University of Washington, testified that the Pearl-Benson test is the best known test for determining the presence of sulphite pulp liquor, that it is usable and accurate (for detection of harmful amounts of liquor, "harmful" in sense used by plaintiff — amounts not below 10 parts of liquor per million of water), that he used it on test water taken over a number of days from various sections of Padilla Bay surrounding plaintiff's oyster beds, and that he found no pulp liquor in the water over the adjacent Nauman and Grant beds or in the other tested waters nearest plaintiff's oyster beds. Dr. Kobe also made numerous tests on water samples taken on dif-

ferent tides from stations in 3 different tidal cycles or gateways (all there were) between defendant's pulp mills and Padilla Bay over a period of about three months, and these tests showed small amounts of liquor at some of the stations nearest the pulp mills, but showed negative at the stations in these gateways nearest the plaintiff's oyster beds. He said the reason these gateways were used instead of locations over plaintiff's oyster beds for test water sampling was that if pulp liquor was reaching the oyster beds it would certainly show up in these gateways, and that in his opinion no pulp liquor reached Padilla Bay from defendant's pulp mills.

Defendant's witness Dr. Haffner, a chemist of wide experience in pulp pollution problems, made chemical tests of a great number of water samples taken at 3 different stations over plaintiff's oyster beds from time to time during the months of March, April, May, June, July and August, of 1940 and January, February, March, April and May, 1941, and Dr. Haffner was unable at any time during any of those months to find any pulp liquor in the water over plaintiff's oyster beds, although he found a high consumption of oxygen in the water which he attributed to presence of waste materials brought in by surface drainage from the surrounding rural country side.

Both Dr. McMillan and Mr. Kneisley for the plaintiff testified that by microscopic examinations they found wood or pulp fibers in Padilla Bay water but they also said that, although the fibers were of a kind which could have come from a sulphite pulp source, they could not by their examinations tell where these fibers came from. But by a number of chemical tests made by Dr. Pearl of the University of Washington Chemistry Department it was definitely shown that, although the water samples taken near the Anacortes mill showed sulphite pulp fibers, the samples taken some distance away from the mill and near the oyster beds contained either no fibers except a very small trace such as commonly found in any water, or only wood fibers which might come from any wood source and were not traceable to sulphite pulp, or as in one instance fibers which might or might not be traceable to sulphite pulp source because the fibers were of the type used in the manufacture of so many different products.

Biological Tests

● Certain biological tests were under controlled conditions conducted by plaintiff's expert witnesses for the purpose of showing the toxic effects of sulphite pulp liquor upon Japanese oysters and the presence of harmful amounts of such liquor in the water over the Padilla oyster beds.

One of such tests, by or under the direction of Dr. Harvey C. McMillan, who is professor of biology at Seattle Pacific College and an experienced biologist and student of oyster life, was made by the kymograph method by which a lever was at one end attached to the shell of a live oyster immersed in controlled solutions of such liquor, with the other end of the lever in contact with a revolving roll of smoked paper. As the oyster shell opened and closed while the oyster was feeding, the shell movement was recorded on the paper, and to the skilled observer that record reflected the toxic effect of the liquor upon the oyster. This experiment was conducted on dif-

The Oyster Suit Decision

● **Judge Bowen's decision indicates that the management of the oyster company did not understand the planting or raising of oysters and that their troubles must have resulted from such fact.**

The defendant's evidence showed that the Padilla Bay Oyster Company was started as a promotional venture by Rupert H. Bailey and associates and that tracts of land were sold to the general public as a result of a pressure campaign. The promoters of the oyster company platted their tracts into narrow wedge-shaped strips, 6 feet wide at the base of the triangle and two miles in length. These extended out into Padilla Bay. Their scheme was that after these lands were sold and the moneys derived therefrom was paid into the land selling company this money would be loaned to an operating company and the operating company would acquire the seed, plant the lands, harvest and market the oysters.

The company's evidence showed that it was never a success financially and its annual reports placed in evidence indicated that it lost money in every year of its operations; that finally in 1938 it became wholly insolvent and resorted to a proceeding in the Superior Court of King County for a reorganization. It was out of this reorganization that the plaintiff company came.

Apparently the first move of the reorganized company was to institute a suit against the Puget Sound Pulp & Timber Company to recover a sum in excess of $2,000,000 for alleged damages to the oysters of the bankrupt concern. While the court in its opinion does not comment on this feature of the case a mass of evidence was offered by the defendant to show that the suit was not prosecuted in good faith but was an afterthought of the promoters in order to replenish their working capital.

It appears from Judge Bowen's decision that due to their inexperience and failure to follow advice the company planted some of the lands much too thickly. Instead of putting on 15 or 20 boxes of oyster seed to the acre they planted some of it at the rate of 40 to 60 boxes. It was admitted by the defendants' witnesses that these over-planted oysters had not done well. It was claimed by the plaintiff that all of the oysters had been injured by sulphite waste liquor from the two mills at Anacortes and Bellingham.

As a defense the Puget Sound Pulp & Timber Company introduced a mass of evidence showing that the oysters at the present time were in good condition except in those beds where a gross over-planting had taken place and that there was no evidence that they had been injured either directly or indirectly by the sulphite waste liquor. Numerous oystermen from Grays Harbor and other places in the state were introduced as witnesses and they all testified that the oysters in their locality where overplanted had undergone the same character of change and had shown the same unsatisfactory conditions complained of by the plaintiff as to the Padilla Bay oysters. It was also claimed by the defendant that apparently poor growing conditions for oysters have existed from time to time in the oyster growing localities of the state and that there is nothing unusual in having poor oysters in one year and good oysters on the same beds in the years following. These witnesses pointed out that oysters are like any crop, and are subject to fluctuation as to growth and quality. The witnesses also testified that the oysters of the Padilla Bay Oyster Company were fully matured and ready for the market before 1938, the date when the plaintiff says they were injured.

The trial of the case started June 3rd and the taking of evidence ended August 11th, after which attorneys for the parties submitted written briefs and argued the case orally to the court on September 5th.

The thoroughly planned and well executed defense by the Puget Sound Pulp & Timber Company is of great value to the sulphite pulp producing industry. The many thousands of dollars expended by the company in scientific research over a year and a half resulted in the development of very valuable basic material.

Every sulphite pulp mill operator ought to read the accompanying decision by Judge Bowen in its entirety.

ferent oysters in varying solutions of pulp liquor and also in undiluted water from different localities. In some instances of pulp liquor solutions the feeding process was slowed and in others it was discontinued and the oyster died from the effects of the liquor. It was testified by Dr. McMillan that by the kymograph test sulphite pulp liquor solutions as low as 10 parts of liquor per million parts of water were by the biological reaction of the oysters shown to be toxic and harmful to Japanese oysters when exposed over long periods of time; and that this test on oysters immersed in Padilla Bay water showed unfavorable reaction by the oysters. The kymograph test does not purport to show chemical constituents of the liquid used in the test.

And in the broken shell test, Dr. McMillan testified that when he cut and broke away parts of the shells of live oysters and then immersed them in Padilla Bay water, the oysters showed an unfavorable reaction, but there is no way of telling what influence the broken shells and the consequent unnatural exposure uncontrollable by the oysters themselves may have had upon them, and that test like the kymograph test did not of itself show whether it was pulp liquor or some other ingredient in the test water which unfavorably affected the oysters. The specific cause of that unfavorable reaction was in the broken shell test again left to the uncertain realm of possible inferences rather than shown to be the proven work of identified toxic agencies traceable to defendant's pulp mill affluents.

Defendant's witness Dr. Trevor Kincaid, head of the Department of Biology at the University of Washington since 1901, an outstanding expert in the study of oyster life and culture since about 1912, and a grower of Japanese oysters, testified that oysters injured by sulphite pulp liquor always show signs of such injury in their gill or ciliary structures, but that among the great number of plaintiff's oysters taken from the beds from time to time over a long period of time, he did not find a single one which showed any such sign of such injury. It might reasonably be asked whether that kind of physical injury or its effects, if it did exist, would be likely to disappear as a result of transplantation in more favorable waters. That question is not expressly answered by the statement of any witness nor is it expressly answered by this case's record of the history of the approximately 100,000 gallons of plaintiff's oysters transplanted to Similk and Boundary bays, but it must be noted that the evidence in connection with tranplanting or otherwise discloses no objection from any quarter to plaintiff's oysters because of previous physical or pathological injury by pulp liquor. Dr. Kincaid said he "was unable to find at any time on any of the samples any sign of pathological change in the oysters. They all were perfectly normal insofar as their structure and their physiological activities were concerned." (Tr. 3703). There is no evidence of actual physical injury to the oysters by pulp liquor.

Plaintiff contends, however, that aside from actual phiysical injury the oysters will not take sufficient food from water containing only a relatively small amount of pulp liquor which results in retarded growth and poor condition of the oysters, and therefrom plaintiff, noting the bad condition before and the improved condition after transplanting, argues that the improvement in the growth and condition of Padilla oysters when transplanted to Similk Bay and to the B. C. Packers Boundary Bay beds proves the presence in Padilla Bay of pulp liquor in solutions sufficiently strong to adversely affect the oysters. But this contention of plaintiff is greatly weakened if not negatived by positive proof that similar improvements in the growth and condition of Padilla oysters resulted from transplanting some of them from the Lundin beds on the north end of the Bay to other locations in Padilla Bay westerly from the present Lundin beds, on new beds nearer to Hat and Saddleback islands and the Guemes Channel currents north of those islands.

Tidal Currents

● Professor Charles W. Harris, head of the Department of Hydraulics, University of Washington, and a teacher in tidal current subjects since 1907, made a study of currents affecting the waters of Bellingham, Samish and Padilla bays. He testified in effect that by reason of the action of these tidal currents none of the liquor from the Bellingham and Anacortes mills ordinarily reaches Padilla Bay. This conclusion was supported by Witness Huntoon, an engineer and fish trap locator, and by witnesses Kaylor, Frank Gilkey and William Gilkey, tug boat men, and by Dr. Benson, head of the Chemistry Department, University of Washington. Professor Harris studied these currents during a period of about three months beginning in February, 1940, after a preliminary study in September, 1939. His testimony and that of others is to the effect that, by tidal currents feeding into and out of Skagit Bay through Swinomish Slough and into and out of the Straits of Georgia through Rosario Straits, Guemes Channel, Bellingham Channel and Hale passage, the waters in and about Bellingham and Padilla bays are moved in and out in such manner that the waste pulp liquor of defendant's Bellingham and Anacortes mills runs out away from Padilla Bay on the ebb tide, and that on the incoming tide fresh sea water from Rosario Straits and Skagit Bay is brought into Padilla Bay.

What Is Wrong with the Oysters?

● Naturally throughout the trial the dominant question presented by the issues was, What is wrong with plaintiff's oysters? Bearing upon that question, and in addition to the scientific testimony produced by both sides, there was introduced by defendant the testimony of some 18 experienced growers (including Dr. Kincaid who also testified as a scientific expert) of Japanese oysters on Samish Bay, Henderson Bay (near Tacoma), Willapa Harbor and Grays Harbor. These witnesses inspected plaintiff's beds and oysters and, with some exceptions, found the oysters on plaintiff's south end beds generally in good condition, but said that as to the north end beds, although the oysters on the outside or periphery of the beds and those which had become scattered were in good condition, the oysters in the center of the beds were too thick and were in very bad condition. This condition and the effects of it upon the oysters were described by these practical oystermen variously as too thickly planted oysters, heavily overplanted, not cultivated, "not moved or done anything with for six years," oysters in very bad condition, bad color, not fat, too lean, thin, poor, "about as lean as they could get and live," "piled up in very poor condition," "planted very, very thickly," "planted too thick and they have not been cultivated," "surprised at the thickness that they were planted. I didn't see how they could live as thick as they were," "they would not get fat when they were planted as thick as they were," the oysters were thin "because there are too many oysters," "all thin oysters I ever had any experience with were pretty much all the same color" (commenting upon the color similarity between the poor oysters on the north end beds and other thin oysters the witness had seen).

Among these oystermen witnesses was former State Senator E. N. Steele, of the Rock Point Oyster Co. on Samish Bay, who has grown Japanese oysters since about the beginning of the industry, has for several years been President of Pacific Oyster Growers Association, and is manager for the Olympia oyster business of Rayonier Incorporated at Oakland Bay and Chapman's Cove in the Shelton area. He testified that (Tr. 2727):

> "As you get out into the tract (the Lundin or north end tract) even 50 feet you will notice the difference in the oysters that are on top. The oysters are as much as 3 deep and if you go down to the one on the bottom it is nothing but skin and brown—or the greenish tinge and just absolutely in a very bad condition." And (Tr. 2730)
>
> "It is only when you get inside of the outer rim that they are not so fat and those underneath, as I explained, are very poor; but outside of that there is nothing wrong with them."

Dr. Kincaid, who operates in Willapa Harbor his own 53-acre oyster farm, testified that in the earlier experimental stages of the industry the oysters were planted too thick resulting in serious trouble in undernourished and undeveloped oysters through lack of the food supply, and that that condition and result are paralleled by present conditions in Padilla Bay (Tr. pp. 3682-86). As to waters like those of Padilla Bay, he said there was no such thing as an unlimited oyster food supply. He "found an enormous range in the appearance of the (plaintiff's) oysters themselves; that is, in the size of the oyster and in their condition. And that often came about in a very short distance; just a few yards." (Tr. 3703-04). He also said that "There were differences due to crowding; the fact that some of them were densely massed; some of them are widely separated, and some of them are in masses and clusters * * *" (Tr. 3704). and in effect that these (among other) differences in environmental conditions affect the food supply of the oysters (Tr. 3705). Also among the badly crowded oysters Dr. Kincaid found elongated, oddly shaped ones, of which he said (Tr. 3713-15):

> "So, you get a very large number of that sort, a very impoverished-looking oyster; that is, all in that particular area. And only a short distance away, separated by a very short distance, you have oysters of this type (indicating a normally shaped one, in Exh. A-240).
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> * * * * *
>
> "* * * These differences are due to the processes of natural conditions; ecological differences of different sections of the bay, due to differences in current and food supply, differences in elevation, differences in the way the currents flow over the beds, and partly due to human

agency; that is, to crowding, to poor cultivation, failure to break up the clusters to give the oysters a chance to grow, and the massing of them in too great masses in restricted areas."

He further stated that oysters in an emaciated or impoverished condition ordinarily have a greenish or brownish shade due not to anything wrong with the oysters except their impoverished condition (Tr. 3725). His testimony is in agreement with other witnesses to the effect also that where the Padilla oysters are not in a crowded or massed condition and are scattered and cultivated properly under conditions enabling them to obtain a proper amount of food, the oysters are generally normal and healthy.

Some of plaintiff's witnesses testified that the shells of dead oysters at times appeared on the beds in large numbers indicating excessive mortality, but Mr. Amos, manager for Rock Point Oyster Co., and others of defendant's witnesses, including Dr. Kincaid who gave special attention to this subject, said they saw no evidence of abnormal mortality among plaintiff's oysters.

Other Marine Life Healthy

• It is a most notable circumstance that other forms of sea life in Padilla Bay, such as blue mussels, limpets, scallops, six-ray starfish, jellyfish, sea slugs and crabs, native to the Bay's waters, are now in normal condition and show no signs of injury from pulp liquor or otherwise. Dr. Kincaid testified that in May, 1940, and April and July, 1941, he inspected the Padilla oyster beds and there examined 25 or 30 kinds of these little animals which he said are more delicate in their reaction to deleterious chemical changes than oysters are, and found among plaintiff's oyster beds no change in kinds or condition of such small sea life from what he had seen in Padilla Bay some years before when he first visited the Bay before any Japanese oysters were planted there. From the condition of this more sensitive sea life Dr. Kincaid saw no approaching disaster for the oysters.

Nearby Oysters Unaffected

• It unquestionably appears from the testimony that, in the waters suspected by plaintiff to be affected by defendant's pulp liquor and fiber, the oysters on beds other than the plaintiff's, such as the beds of Fidalgo Bay and March Point (nearer to defendant's Anacortes Mill than plaintiff's beds), the Huntoon and the extensive Rock Point beds in Samish Bay (where occurred the first commercial development of Japanese oysters in this state in 1927 or 1928), and the small beds north of Point Francis in Bellingham Bay much nearer to defendant's Bellingham mill than palintiff's beds, have been and are in good merchantable condition unaffected by pulp liquor or pulp fiber, and that the Rock Point oysters from Samish Bay have customarily enjoyed a market.

Not all of the evidence nor all of the specific points and arguments advanced in the exhaustive briefs of counsel for the respetcive parties have been discussed here as that would apparently extend this decision unnecessarily without corresponding benefit. Although all of the evidence has not here been discussed, it has all been considered, and that which has been mentioned is deemed of outstanding importance among the great mass of testimony introduced; and the court has endeavored to carefully study and weigh all the evidence in the light of and as it bears upon the various contentions of counsel on each side and to finally arrive at the conclusion required by the preponderance of the evidence, with the following results.

Decision

1. It must be concluded from the testimony of the oystermen and others and from what the trial judge observed on the beds that plaintiff's oysters, usually planted 40 to 60 boxes of seed per acre (and more on some beds), were except some south end beds generaly planted too thick, and that throughout the beds generally are oysters in the original seed clusters not broken up as they should have been, as well as other oysters drifted together on level surfaces and collected in pot holes by wind and wave action and not scattered in accordance with good cultivation, with the result that through crowding and consequent lack of food supply the oysters have not been able to develop and fatten into marketable condition. That conclusion is strongly indicated by testimony that in more recent years, notably since about 1938 or 1939, in localities other than Padilla Bay, the growers have been reducing their seed plantings to approximately 20 to 25 boxes per acre, with definitely better results. There are, however, some good oysters on plaintiff's beds, notably on the periphery of the beds and also where they have become scattered, as well as on some south end beds not too thickly planted.

2. It is preponderantly established by the greater weight of the evidence that the water from Bellingham Bay does not normally go into Padilla Bay, but that the water goes out of and into Bellingham Bay through the passages to and from Rosario Straits and the Straits of Georgia without passing through Padilla Bay. Likewise it is established that the waters of Fidalgo Bay and Anacortes Harbor do not normally go into Padilla Bay, but that those waters go out of and into Fidalgo Bay and Anacortes Harbor through Guemes Channel and the northward tidal currents around Guemes Island, with some water from the inward tidal passage through Guemes Channel going between Hat and Guemes islands into the north end of Padilla Bay; that the south end of Padilla Bay is filled principally through Swinomish Slough which flows northward more of the time than it does southward; and that it is only on exceptional occasions of severe wind that drift wood and logs are driven across the normal tidal currents into Padilla Bay from Bellingham Bay and Anacortes Harbor. From this situation and the testimony of absence of pulp liquor in Padilla Bay, and in the absence of more convincing proof to the contrary, it is concluded that the waste sulphite pulp liquor and fiber from defendant's Bellingham and Anacortes mills do not reach the waters over plaintiff's oyster beds in Padilla Bay in quantities though insignificant amounts of such liquor and fiber may conceivably on exceptional occasions of severe wind be driven across normal currents into Padilla Bay, as drift wood and logs are on such exceptional occasions so driven.

3. After careful consideration of all the testimony and exhibits in the case, the credibility of the many witnesses and the weight of the testimony of each, all that the trial judge saw upon the view by him of the things and conditions connected with the trial, and the briefs and arguments of counsel, the court is of the opinion, and finds and decides, that plaintiff has failed to sustain its burden of proof, and that there is a failure of necessary proof on plaintiff's part in that plaintiff has not by a preponderance of the evidence established either (1) that plaintiff's oysters have been or will be injured by defendant's pulp liquor or fiber, or (2) that there has been or will be present in the water over plaintiff's oyster beds sufficient quantities of such liquor or fiber to injure plaintiff's oysters. Plaintiff, therefore, is not entitled to recover any relief against defendant.

The foregoing sufficiently disposes of the matter and renders unnecessary further rulings upon defendant's separate affirmative defenses.

Formal findings, conclusions and decree may be settled upon notice or stipulation.

(Signed) JOHN C. BOWEN,
United States District Judge.

Yankee Dryer for No. 9 Next Month

• A Beloit Yankee dryer, 12 feet in diameter and 137 inches wide, is to be installed on the number 9 machine of Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, Camas, Washington. This installation is to be completed and in operation November 20th.

This will make possible the manufacture of improved grades of napkins and household towels, in addition to the tissue regularly manufactured on number 9 machine.

Drew & Hoffman, of Portland, Oregon, are furnishing the Yankee hood system, vapor absorption system and exhaust.

United Kingdom Pulp And Paper Situation

• Reports from the United Kingdom indicate increasing stringencies in supplies.

The Paper Trade Review of London, for August 29th reports serious shortages of waste paper with demand far exceeding supply. Waste paper has come to assume greatly increased importance in the British paper trade, due to the very severe limitations on the importation and use of wood pulp.

Such quantities of wood pulp as are imported can only be used under license issued by the government and which is granted solely for essential purposes. It is said that the consumption of wood pulp in Britain is controlled at less than 25% of pre-war and on that basis British imports from North America would be less than 5% of the total pulp production of the United States and Canada.

It is not anticipated that as a result of the Lend-Lease Act there will be any increase in shipment of wood pulp to Great Britain from its present level. Considerable quantities of wood pulp have been shipped to the United Kingdom during the open season of the St. Lawrence River this year, and it is reported that the quantity of wood pulp going to the United Kingdom from Canada considerably exceeds that going from the United States.

A considerable quantity of paper of quite good quality is now being produced from straw.

Robert B. Wolf Awarded TAPPI Gold Medal

● The gold medal of the Technical Association of the Pulp and Paper Industry will be presented to Robert B. Wolf at the Annual Meeting in New York next February. This medal is awarded by vote of the executive committee to an individual who has made outstanding contributions to the technical advancement of the pulp and paper industry.

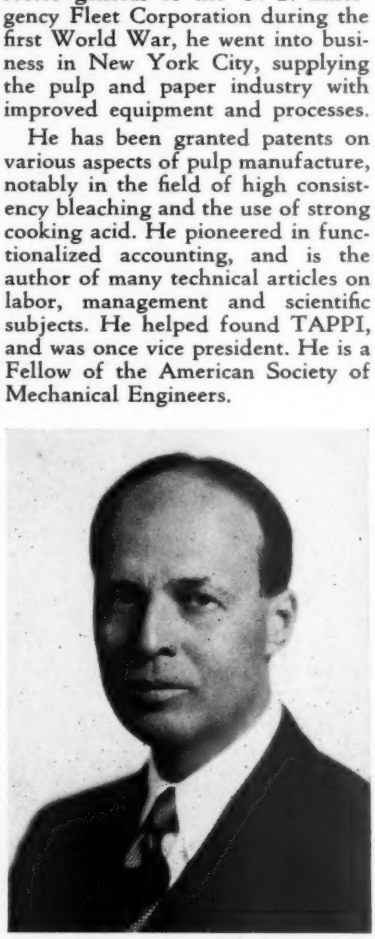
Previous awards have been made to William H. Mason (1928), president of the Masonite Corporation Process; Ogden Minton (1928), president, Minton Vacuum Dryer Corporation; Ernst Mahler (1933), vice president, Kimberly-Clark Corporation; Edwin Sutermeister (1935), chief chemist, S. D. Warren Company; William H. Millspaugh (1936), president, Millspaugh, Ltd.; Clarence J. West (1937), editor of publications, Institute of Paper Chimistry; Carl B. Thorne (1938), vice president, Canadian International Paper Company; J. Newell Stephenson (1939), editor, Pulp and Paper Magazine of Canada, and Otto Kress (1940), technical director, Institute of Paper Chemistry.

Robert Bunsen Wolf, since 1931 manager of the Pulp Division of the Weyerhaeuser Timber Company, Longview, Washington, was born in Newark, Delaware, received a B.E.E. degree from the University of Delaware and later an M.E. degree from that institution.

After practical experience as workman in pulp and paper mills in New York state and New England, he held successively executive positions with the International Paper Company, the Union Bag and Paper Company, and the Burgess Sulphite Fibre Company.

While with the latter, at Berlin, N. H., he developed the graphical methods for evaluating qualitative and quantitative manufacturing variables which greatly accelerated the science of pulp making. His previous practical application of the method of graphically recording steam, gauge and gas pressures during the cooking operation were extended to include "progress" records and the use of nonfinancial incentives to release the creative power of the individual workman. In 1917, he became manager of the Spanish River Pulp and Paper Company's mills in Ontario, Canada. After serving as staff assistant to the director general of the U. S. Emergency Fleet Corporation during the first World War, he went into business in New York City, supplying the pulp and paper industry with improved equipment and processes.

He has been granted patents on various aspects of pulp manufacture, notably in the field of high consistency bleaching and the use of strong cooking acid. He pioneered in functionalized accounting, and is the author of many technical articles on labor, management and scientific subjects. He helped found TAPPI, and was once vice president. He is a Fellow of the American Society of Mechanical Engineers.



ROBERT B. WOLF, Awarded TAPPI Gold Medal

Powell River Buys China Clay Deposit

● Powell River Company has augmented its supply of china clay by the purchase of deposits in the Salmon River Valley 20 miles northwest of Prince George.

E. J. Beale, representing Powell River, concluded the deal October 10, and made arrangements with the provincial government of British Columbia whereby the latter will pay half the cost of building a road into the ground to be developed by the pulp and paper organization.

The clay will be used by Powell River Company in newsprint manufacture. Until now the company has obtained its supply of clay from the British Isles, but wartime interruption of shipping caused such irregularity in delivery that Powell River executives considered that an independent supply should be developed.

Priorities

● The following letter was sent out on October 3rd by E. W. Tinker, executive secretary of the American Paper & Pulp Association, to pulp paper and board mills throughout the country on the subject of priorities.

"By now, many firms in the industry have used Form PD-1 to obtain necessary supplies, parts and equipment. In most cases, applicants have been successful in obtaining ratings on their applications.

"This procedure probably will be modified within a short time. It is expected that a blanket priority rating will be issued, covering either the pulp and paper industry specifically, or all industries. The blanket rating, however, probably would apply only on repair parts needed in the case of "an actual or imminent" breakdown.

"As you know, the assignment of a rating, either upon an individual application or under a blanket priority, may not solve your problem. An applicant may obtain a rating such as A-10, which may not be high enough to obtain the necessary supplies and equipment.

"It is suggested that, before filing application for preference rating, you contact your suppliers to determine, if possible, the minimum rating needed to obtain delivery on the required dates. Such information should be included in your application in paragraph 6 (a). If a blanket priority order is issued, it still would be advisable to determine the rating which you would need. In many instances, the blanket priority rating which it is expected will be issued, may not be high enough to assure you of prompt or possibly any delivery."

Canadian Cigarettes To Be Packaged in Cardboard

● Beginning with the new year, or possibly before then, cigarette manufacturers in Canada will use cardboard exclusively in packaging cigarettes, according to advices received by British Columbia manufacturers from Steel Controller F. B. Kilbourn at Ottawa.

Effective September 16, no new orders were to be placed with producers of sheet steel for use in manufacture of cigarette containers. Sheet metal on hand and especially adapted to this purpose may, however, be used in manufacture of cigarette tins up to the end of the year "after which the production is to be discontinued."

Henderson Threatens Pulp Price Ceiling As Several Firms Announce Increases

● In recent weeks several domestic producers of wood pulp have announced price increases contrary to the general industry policy of adhering to the price schedule in effect since July 1, 1940. This brought a reaction on October 7th from administrator Leon Henderson, Office of Price Administration, who threatened to impose a price ceiling on the industry. The Associated Press report of that date follows:

"Advancing prices may compel the Office of Price Administration to impose a ceiling on wood pulp prices, Administrator Leon Henderson said tonight. Increases have ranged from $4 to $11.50 a ton, it was stated.

"Henderson said four large companies had announced price increases for the last four months of the year, whereas he added that he had understood that in the absence of "unusual circumstances" no advances would be made for the remainder of 1941. An agreement, he asserted, was reached last spring by his office and a number of leading pulp companies which averted price rises at that time.

Costs Probed

"The price administrator declared that if a ceiling were established it would be at or below third-quarter levels.

"The tariff commission, Henderson said, was conducting an industry-wide investigation into pulp producing costs at his request, and he therefore preferred to wait for the commission's findings 'before deciding whether action is necessary.'

" 'However," he said, 'there is ample evidence already at hand to show that the prices at which wood pulp has sold over the past twelve months have been more than adequate to most producers. To allow still higher prices when every effort must be made to resist inflation seems out of the question.'

4 Firms Cited

"Henderson named these as having boosted contract pulp prices:

"Container Corporation of America, Chicago, Conus brand pulp from $60 to $70 a ton; Eastern Corporation, Bangor, Me., Orono pulp from $63.50 to $75 a ton; West Virginia Pulp and Paper Company, New York, soda pulp from 66 to $70 a ton; St. Regis Kraft Company, Tacoma, Wash., from $82.50 to $87.50 for October, with new prices for the rest of the year to be fixed later.

"Henderson said representatives of these four companies, as well as other principal pulp firms, were being called to Washington for a meeting on October 10."

The Container Corporation's increase was on unbleached kraft, while the increase by Eastern Corporation was apparently on a special unbleached sulphite. St. Regis Paper Company, Kraft Pulp Division, raised the price of its bleached kraft pulp.

Sir Herbert Gepp Comments On Australian Paper Making

● Despite the demands on manpower and the premium being placed on production in Australia the pulp and paper operators down there are making provision for more relaxation for their employees, according to Sir Herbert Gepp, managing director of Australian Paper Manufacturers, Ltd., who has been spending a few days in British Columbia visiting mills.

"We're providing more rest for pulp and paper workers not because of any lofty humanitarian motive," said Sir Herbert, "but because we believe it is good business—because we believe that a man who gets plenty of rest does a much better job."

Sir Herbert says that forty years of industrial administration has convinced him that not nearly enough attention has been paid to the human unit in industry.

"Men engaged in high-speed industries, working twelve hours a day, somtimes six days a week, should be given opportunity to recuperate," he continued.

"Just recently we introduced into our mills a system by which every man goes on holidy from Thursday to Tuesday every three months. We have proved that this makes for greater efficiency."

Sir Herbert went from Vancouver to Ottawa and Washington, where he hoped to interest government officials in a plan for collaboration with Australia in a uniform plan for handling of manpower resources in war industry.

"I'm going to try to convince them that a good deal of our industrial trouble is due to mental strain caused by overtime and insufficient relaxation," said Sir Herbert.

Powell River Completes New "Scanlon" Dam

● On October 2nd, 1941, just one year from the date of the first pouring in 1940, the last concrete was poured on the Powell River Company's permanent dam at Lois River.

The dam replaces the old temporary log structure erected in 1930, coincident with the installation of the Company's seventh newsprint machine.

The Lois River dam is a radius arched concrete structure; the height of the crest above the river bed is about 130 feet. Its length is approximately 600 feet; the total amount of rock excavated was around 32,000 cubic yards. The total weight of the dam will be 125,000 tons. The entire dam structure, including wing wall, etc., will cotnain about 61,000 cubic yards of concrete.

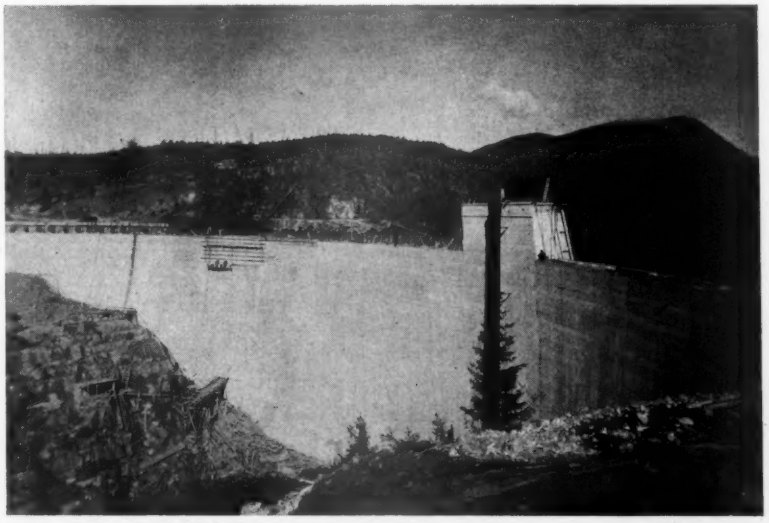
The contractors were the Stuart Cameron Company of Vancouver. B. C. Condit was consulting engineer. Supervision and engineering work was under Ned Beaton, former resident engineer at Powell River.

The new dam was officially dedicated by Mrs. Helen Scanlon Sample, daughter of the late M. J. Scanlon, president of the Powell River Company, on August 17th, 1941, and named the Scanlon dam.

Finishing touches will be made within the next few weeks, and it was expected the last construction worker would move out by October 15.

Davis Attends AFL Meeting in Seattle

● V. A. Davis, president of Papermakers local 130, Camas, Washington, attended the national convention of the American Federation of Labor in Seattle during the week of October 6th.



The POWELL RIVER COMPANY'S newly completed "SCANLON DAM" on Lois River as it appeared on October 4th.

U. S. Pulp Production Up 26.5% In 1940 Over 1939

● Production of wood pulp in the United States during the calendar year 1940 reached a toltal of 8,851,840 short tons of all grades mechanical and chemical, having a total f.o.b. mill value of $295,524,079, according to the Bureau of the Census' annual report issued in Washington October 8th. This showed a big increase, both in point of tonnage of production and value of pulp produced, over a total of 6,993,334 tons valued at $209,061,107 in 1939. The rise last year over the year before was equivalent to 26.5 per cent in volume, and 41.3 per cent in value.

The 1940 production of pulp comprised 1,561,789 short tons of bleached sulphite valued at $88,450,357, against 1,217,249 tons valuedd at $61,307,367 in 1939, the census revealed; 1,029,895 tons of unbleached sulphite valued at $40,532,853, against 729,203 tons valued at $24,736,494; 3,166,263 tons of unbleached sulphate valued at $77,830,897, against 2,538,204 tons valued at $55,242,263; 558,872 tons of bleached sulphate valued at $24,747,444, against 424,453 tons valued at $17,697,206; 548,047 tons of soda pulp valued at $27,939,508, against 441,565 tons valued at $19,710,156; 164,940 tons of semi-chemical and other wood pulp valued at $2,735,127, against 151,658 tons valued at $2,105,267; 59,113 tons of screenings, mechanical and chemical, valued at $533,938, against 46,127 tons valued at $552,184, and 1,762,821 tons of mechanical pulp of a value of $32,753,955, against 1,444,875 tons valued at $27,710,170.

U. S. DEPARTMENT OF COMMERCE
Bureau of the Census
Washington

October 8, 1941

CENSUS OF FOREST PRODUCTS: 1940

Consumption of Pulpwood and Production of Wood Pulp

The consumption of pulpwood and the production of wood pulp in the United States increased 27.1 and 26.6 percent, respectively, in 1940 as compared with 1939, according to preliminary figures released today by Director J. C. Capt, Bureau of the Census, Department of Commerce.

The consumption of pulpwood in 1940 was 13,742,958 cords costing $109,739,958, compared with 10,816,466 cords used in 1939 costing $84,538,835. Wood-pulp production continued to expand in 1940 and amounted to 8,851,740 tons valued at $295,524,079 as compared with 6,993,334 tons valued at $209,061,107 in 1939.

All figures for 1940 are preliminary and subject to revision.

Table 1.—Pulpwood Consumption, by Quantity and Cost, and by Kind of Wood: 1940 and 1939

Kind of wood	1940		1939	
	Cords	Cost	Cords	Cost
Total	13,742,958	$109,739,958	10,816,466	$84,538,835
Yellow pine, Southern	5,013,478	27,557,380	3,834,644	20,126,230
Spruce:				
Domestic	2,045,519	24,226,288	1,567,643	18,419,481
Imported	963,195	13,614,573	906,806	12,575,102
Hemlock:				
Domestic	2,636,118	19,217,536	1/ 2,218,678	1/ 15,147,529
Imported	152,653	1,100,822		
Poplar:				
Domestic	489,866	4,299,280	354,125	3,179,101
Imported	108,809	1,232,819	123,148	1,461,648
Jack pine:				
Domestic	415,202	3,672,294	1/ 359,755	1/ 3,355,291
Imported	62,773	638,645		
Balsam fir:				
Domestic	388,577	4,067,521	283,506	2,891,304
Imported	83,609	1,043,995	74,705	891,287
Beech, birch, and maple, domestic and imported 1/	298,895	2,939,849	241,039	2,318,285
White fir, domestic and imported	213,445	1,568,522	2/ 159,428	2/ 953,343
Cottonwood	74,584	512,064	64,330	428,119
Tamarack (larch)	11,324	85,222	8,450	64,620
Other woods 3/	509,976	3,059,404	301,195	2,026,107
Slabs and mill waste	274,935	903,744	319,014	701,388

1/ Combined to avoid disclosing data for individual establishments.
2/ Domestic only.
3/ For 1940, domestic chestnut, Douglas fir, yellow poplar, oak, tupelo (and black gum), red gum, willow, and domestic and imported miscellaneous hardwoods not reported separately. For 1939, see published report.

August Paperboard Production Higher Than July

● The production of paperboard of .012 of an inch or more in thickness in the United States reached a new high level during August showing an increase of 8.2 per cent over the amount produced in July, according to data released October 10th by the Bureau of the Census, Department of Commerce.

Paperboard production in August amounted to 545,116 tons as compared with 503,620 tons produced in July, indicating a steady upward movement. The August production represents 95.9 per cent of the rated capacity of the 103 concerns reporting. The ratio of inch hours of operation to rated capacity for August, 1941, was 91.1 per cent as compared with 82.9 per cent for July, 71.5 per cent for August, 1940, and 69.4 per cent for August, 1939.

Although there was a slight decrease in the new orders received during the month, unfilled orders at the end of the month established a new record level.

Consumption of waste paper reached the peak in August, 1941, when 411,073 tons were consumed in the manufacture of paperboard, showing a 6.8 per cent increase over the previous month. The August, 1941, figure is 29.3 per cent greater than the tonnage consumed in August, 1940.

North American News Production Lower For Nine Months

● Production in Canada during September, 1941, amounted to 298,276 tons and shipments to 305,010 tons, according to the News Print Service Bureau. Production in the United States was 78,657 tons and shipments 80,252 tons, making a total United States and Canadian newsprint production of 376,933 tons and shipments of 385,262 tons. During September, 29,403 tons of newsprint were made in Newfoundland, so that the total North American production for the month amounted to 406,336 tons. Total production in September, 1940, was 390,200 tons.

The Canadian mills produced 67,658 tons less in the first nine months of 1941 than in the first nine months of 1940,

which was a decrease of two and six tenths per cent. The output in the United States was 4,473 tons or six tenths of one per cent more than in the first nine months of 1940; in Newfoundland production was 2,026 tons or eight tenths of one per cent more, making a net decrease of 61,159 tons, or one and seven tenths per cent less than in the first nine months of 1940.

Stocks of newsprint paper at the end of September were 148,480 tons at Canadian mills and 11,864 tons at United States mills, making a combined total of 160,344 tons compared with 168,673 tons on August 31, 1941, and 177,542 tons at the end of September, 1940.

OPA Announces Paperboard Prices for East

● Ceiling prices for all grades of paperboard sold east of the Rocky Mountains, corresponding to those that have prevailed under voluntary agreements with leading producers, are established in price schedule 32, it was announced October 1st by Leon Henderson, administrator of the Office of Price Administration.

The new schedule went into effect the same day the announcement was made. The maximum delivered prices for the three base grades are the same as those specified in the voluntary agreements; that is, $45 per ton for chipboard, $60 a ton for single manila lined board, and $75 a ton for white patent coated news board. Differentials up and down in line with the expiring agreements are established for the other types, depending upon weight, grade and quality.

All types of paperboard used in the manufacture of set-up paper boxes, folding cartons and shipping containers are covered. The differentials established in the schedule are those which are familiar to the trade. A maximum base price is set for a given classification and to that base are added or subtracted amounts consistent with the quality for all types included in the classification. For example, to the maximum base price of $45.00 per ton for plain chipboard may be added not more than $5.00 per ton for sales of from one to three tons; $2.50 for more than three tons, but less than 10 tons; with the base price of $45.00 applying to sales of ten tons or over. In the case of white vat lined board, which is included with chipboard in the "set-up boxboard" classification, the maximum base price is $45.00 a ton, plus $20.00 for orders of three tons or less; or plus $17.50 for orders of over three, but less than 10 tons; or plus $15.00 for orders of ten tons or over.

Thus, in effect, there are three ceiling prices, $65.00, $62.50 and $60.00 a ton for white vat lined boxboard. This same system prevails throughout the schedule, although in some cases minimum deductions from the base price are provided for.

In addition, there are differentials allowed for varying thickness and for special operations in all of the grades. Under a special exception, the additional charges for quantities less than ten tons are eliminated if the buyer orders sizes in proper quantities and dimensions to fill the width of the paper making machine. All of the ceiling prices are the maximums that may be charged for the respective grades and tonnages delivered to the consumer.

Weyerhaeuser Adopts Defense Bond Buying Plan

● Employees of Longview Mill, Pulp Division Weyerhaeuser Timber Company, Longview, Washington, have the privilege of buying U. S. Defense Bonds through voluntary deductions from their pay checks, starting September 30th.

The employees wishing to subscribe to the service authorize a regular payroll deduction of any amount they may wish, with a minimum deduction of $3 per month. The deuctions are held by the company until the sum is sufficient to purchase a defense bond of the denomination stipulated by the purchaser, then the defense bond is made out to the purchaser and turned over to him.

With the inauguration of this program several employees of the pulp mill signed up for one $25 bond per month.

When the regular deductions have accumulated sufficiently to pay for the purchase of a bond for an individual employee, a check is made out at the company office, for purchase of said bond, and presented to Collin Slane, treasurer of Weyerhaeuser Pulp Employees Federal Credit Union, who issues the bond.

These bonds are also on sale at the credit union office for those employees who do not wish to buy via payroll deductions.

Malcolm Otis Vacations In Seattle

● M. J. Otis, assistant resident manager, Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, West Linn, Oregon, spent his annual two-week's vacation at his mother's home in Seattle, Washington. The vacation started September 15th.

No. 3 Machine Now Making Pulp at Columbia River

● The installation of the third paper machine at the plant of the Columbia River Paper Mills, Vancouver, Washington, was completed the latter part of September, and production of sulphite pulp began on October 1st. This machine was built by the Beloit Iron Works for the Tumwater Paper Mills Company in 1929 and has been idle for some years.

At Vancouver the Beloit machine, which was originally designed to produce a wide range of papers from tissue to wrapping and newsprint, will turn out both pulp and paper. Its production will increase the mill's total by about 40 tons daily to 150 tons daily, according to Nils G. Teren, vice president and general manager.

To accommodate No. 3 machine the Columbia River machine room was enlarged, the wood room expanded and a spherical acid accumulator installed to release a digester formerly employed for acid storage in the Chemipulp System. The spherical accumulator was lined by the Stebbins Engineering Corporation of Seattle.

Weyerhaeuser Men Organize Bowling Teams

● Longview Mill, Pulp Division Weyerhaeuser Timber Company, Longview, Washington, organized two bowling teams this fall. These teams are known as Weyerhaeuser Pulp teams No. 1 and No. 2. Each team is composed of five players and one spare, making two squads of six men each. The teams bowl at the Longview bowling allies one night weekly.

Collin Slane, treasurer of Weyerhaeuser Pulp Employees Federal Credit Union, is manager of the bowling teams.

Table 2.---Wood-Pulp Production, by Quantity and Value, by Process for the United States: 1940 and 1939

	1940		1939	
	Short tons	Value (f.o.b.mill)	Short tons	Value (f.o.b.mill)
Wood pulp, aggregate.....	8,851,740	$295,524,079	6,993,334	$209,061,107
Mechanical, total...	1,762,821	32,753,955	1,444,875	27,710,170
Not steamed.....	1,609,857	30,310,139	1,342,643	25,379,398
Steamed.....	152,964	2,443,816	102,232	2,330,772
Sulphite fiber, total	2,591,684	128,983,210	1,946,452	86,043,861
Unbleached.....	1,029,895	40,532,853	729,203	24,736,494
Bleached[1].....	1,561,789	88,450,357	1,217,249	61,307,367
Sulphate fiber, total	3,725,135	102,578,341	2,962,657	72,939,469
Unbleached.....	3,166,263	77,830,897	2,538,204	55,242,263
Bleached.....	558,872	24,747,444	424,453	17,697,206
Soda fiber, bleached and unbleached.....	548,047	27,939,508	[2]441,565	[2]19,710,156
Semichemical and other wood pulp....	164,940	2,735,127	151,658	2,105,267
Screenings, mechanical and chemical[3]	59,113	533,938	46,127	552,184

1/ Includes data for "Superpurified" and "Rayon and special grades" to avoid disclosing figures for individual establishments.
2/ "Bleached" only.
3/ Combined to avoid disclosing data for individual establishments.

Some Comparisons Between Sulphite Pulp Manufacture on the Pacific Coast and in Sweden

by AXEL EKWALL*

Wood

• A factor, which seems more than anything else to have placed its stamp on the pulp industry of the Pacific Coast, is the big resource of wood in this area. Wood is obtainable in good quality and at low cost as raw material for pulp and also as fuel and as material for building.

In the sulphite pulp mills on the Pacific Coast acid tanks, blow pits, pulp chests and pipes are extensively made of wood, which certainly is of considerable value in making a pure pulp. In Sweden wood is used to some extent for the same purposes and is also used in acid towers. Although the trend for a long time has been towards concrete acid towers, it seems worthy of notice, that the acid towers in the mills most recently built in Finland, are made of wood, because such towers are cheaper to erect and are considered easier to repair than concrete towers.

Pulp wood is only half as expensive on the Pacific Coast as compared to costs in Sweden. Since the logs on the Pacific Coast are so large, that equipment for barking and chipping without wasting wood certainly would be very expensive, it therefore seems quite natural, that up to the present time considerable losses have been allowed in the preparing of wood, so that up to 20% of the wood in the logs has been converted into waste wood, which, however, can be used as fuel for the mill. In Sweden the losses in the wood room have been reduced to a very low percentage, due to the limited resources of wood and thanks to the more handy dimensions of the logs—in average size seventy Swedish logs of pulp wood correspond to one log on the Pacific Coast. The most important factor in reducing wood losses in Swedish pulp mills has been the installation of drum barkers instead of the barking machines previously used. In some mills on the Pacific Coast drums are used for barking sawed or split cants in short lengths, and this barking is performed mainly in "dry" condition in order to make the waste directly useful as fuel. In Sweden, on the other hand, the drum barkers always run partially in water, so that the barking causes as small a loss of wood as possible.

AXEL EKWALL, Compared American and Swedish Practices

Unlike hemlock, which is the most common pulp wood on the Pacific Coast, the Swedish pulp woods have a considerable content of pitch, which in fresh wood may cause difficulties in the manufacture of pulp. In order to avoid such difficulties, it is common practice to store the logs about one year, and for that purpose almost every mill has a big wood yard with heavy transport equipment. Storage is also advantageous, because the mill can be supplied with uniformly dry wood, its content of moisture being only half of that in the pulp wood used on the Pacific Coast.

The consumption of pulp wood in Swedish mills is usually expressed in solid volume, based on measurement of every log in connection with the logging operations. On the Pacific Coast the consumption of pulp wood in the mills is mostly figured in board feet, log scale, which means the quantity of one-inch lumber obtainable from the logs. As the losses in the wood room always are smaller than those in a lumber mill, computation of the wood consumption as expressed in solid volume should be more logical in pulp manufacturing. Cordwood measurement is used in buying pulp wood on the Pacific Coast as well as in Sweden, but these figures are of less interest to the pulp manufacturer as the cordwood volume is influenced by such factors as diameter and curvature of the logs or the dimensions of split cordwood.

In some mills, both on the Pacific Coast and in Sweden, the chips are weighed, which gives a valuable check on the consumption of wood for the manufacture. If the consumption of wood in solid volume is known, weighing of chips and waste wood also provides interesting information about the solid volume weight, this often giving an indication of the rate of growth of the wood.

Steam

• The abundant resources of fuel on the Pacific Coast seem to be symbolized by the big waste burners at all lumber mills, where large quantities of waste wood are destroyed without making use of its fuel value. In the sulphite pulp mills waste wood from the wood rooms and from lumber mills is used in addition to smaller amounts of crude oil as fuel for generating steam, which thus is available at only half of the price of steam in Swedish pulp mills, where imported coal is chiefly used as fuel.

The steam consumption per ton of pulp in the mills on the Pacific Coast is higher than in Swedish mills, because steam is used for special purposes, and also because in most cases it has been considered uneconomical to recover heat from certain low-grade sources. While the sulphur in Swedish mills usually is fed in solid form into rotary burners, it is common practice in the mills on the Pacific Coast to melt the sulphur with steam before feeding. This provides the advantage of a higher temperature in the burner and hence better conditions for combustion. This is readly shown by the high content of sulphur dioxide, 16-17%, in the gases leaving the combustion chambers. Steam is often used on the Pacific Coast to aid in discharging the gases from the top of the acid towers, while Swedish pulp mills for this purpose utilize a fan or, in most cases, use

*Presented at the Dinner Meeting held by the Pacific Section of TAPPI, Tacoma, Washington, October 7, 1941. Fellow of the American-Scandinavian Foundation and Chemical Engineer, Billerud Company, Ltd., Saffle, Sweden.

no aid at all. To bring the chips down from the chip bins, when filling the digesters, steam is also used in the mills on the Pacific Coast, the steam being blown into the wooden or concrete chip bins through several pipes; in Swedish pulp mills, on the other hand, the chip bins usually are built of iron plates in the lower part, and portable vibrators, outside the bin, make the chips pass down in an even flow. It may also be mentioned, that steam is used in the wood rooms of the mills on the Pacific Coast as power for their special equipment, such as log carriages and splitters, and for lifting the cutterhead of the barkers. Recovery of heat in the wet air from drying machines of the ordinary type and in the waste liquor from the digesters is rather common in Swedish pulp mills but seldom or never applied on the Pacific Coast.

Acid Making

• Hot acid systems are used to about the same extent in Swedish as in Pacific Coast mills. For gas coolers, which are only reserve equipment in mills with hot acid system, both tube and spiral-plate heat-exchangers are used in Sweden. The hot acid tanks are usually placed outside the buildings in Swedish pulp mills and are insulated with some mineral insulating material or with wallboard and roofing paper. In the mills on the Pacific Coast there is in most cases a concrete building around the hot acid tank, such round buildings having been erected at moderate cost with use of a slip form. Moreover, this method of building is used to a comparatively great extent on the Pacific Coast, not only for acid towers but also for chimney stacks, and a whole digester room has even been built in this manner. The acid towers in Sweden are usually built more or less cone-shaped in order to prevent bridging of the limerock, but on the Pacific Coast cylindrical towers seem to be commonly used without trouble.

Due to the high moisture content of the chips and the low recovery of sulphur dioxide from the digesters, it is necessary in the mills on the Pacific Coast to procure a rather high content of free sulphur dioxide in the raw acid. Accordingly, these mills are usually provided with certain aids, hardly ever used in Sweden, to produce an acid of the right composition. One is the pressure tower, in which a part of the sulphur dioxide from the burners or from the digesters can be absorbed in raw acid, and another is deep wells, which have come into common use recently in supplying cool water throughout the year to the acid towers. In some Swedish mills refrigerators are used during the summer to cool water for the acid plant. In connection with this it is of interest to note that in Finland a great many sulphite pulp mills are purchasing liquid sulphur dioxide as part of their sulphur supply, and consequently they can very easily control the composition of their acid by means of the introduction of this additional sulphur dioxide either in the towers or into the acid. Liquid sulphur dioxide is obtained as a by-product in the roasting of copper ore in a smelter, and it is delivered in tank cars to the sulphite pulp mills at a price, which figured on the basis of the sulphur content, is only slightly higher than the price of native sulphur.

Water and Sewage

• The advantage of being able to establish deep wells, which provide several hundred gallons of water a minute, seems to be based upon both the composition of the ground and the fact that most mills on the Pacific Coast are located fairly close to high mountain ranges. Thanks to this location some of the mills also have the advantage of getting good water for their whole consumption from lakes with a natural head of 100-150 lbs./sq. in. at the mill. Filtration of the water seems to be more common than in Sweden, but regarding the quality of the water it is difficult to make any comparisons, as the impurities on the Pacific Coast mostly are of a mineral nature, the turbidity and color being the most important factors in the analysis of the water, while in Sweden the most common impurities are organic matter, which is tested by determining the permanganate consumption of the water.

On the Pacific Coast white water and waste liquor are discharged directly into the sea or the river close to the mill. Most mills, among them all the larger ones, are situated on the coast or along the mighty Columbia River, its tributary, the Willamette River, carrying the sewage from a few other mills. Since the first world war the waste liquor in some of the Swedish sulphite pulp mills has been used for producing alcohol, and during the present shortage of liquid fuel the number of alcohol plants operated in connection with sulphite pulp mills is rapidly growing. As there is at the same time a shortage of all kinds of fuel, experiments on a large scale are going on to make use of the whole fuel value of the waste liquor by its evaporation and combustion, in which manner any nuisance of waste liquor as sewage should definitely be abolished.

Cooking

• The size of sulphite digesters in different mills varies within the same limits on the Pacific Coast as in Sweden. While it is common practice on the Pacific Coast to express the size of a digester in height and diameter, in Sweden the size is always figured by volume. In building new digesters in Sweden a present trend is to abandon the method of riveting and instead use that of welding the plates together, followed by x-ray inspection of the joints.

The processes in the digester rooms of sulphite pulp mills on the Pacific Coast aim much more than in Swedish mills toward as short a cooking cycle as possible. Although the digesters have equipment for forced circulation, and hence there are possibilities for cooking with high density filling, chip packers are seldom used, because high density filling would make it difficult to blow out the pulp completely at the end of the cook. The cooking time in mills on the Pacific Coast is always figured to include the gassing-down time but is still shorter than the cooking time in Swedish mills, where the gassing-down time is not included. The digesters are emptied on the Pacific Coast by blowing, but in Sweden usually by dumping the pulp. Before dumping, part of the waste liquor is drawn off from the digester, preferably through the large strainers in the circulation system. The gassing-down of the digester is accelerated by drawing off the liquor, and the free sulphur dioxide can easily be recovered from this liquor. The liquor is usually preserved in a tank, and from that it is pumped continually through a spiral-plate heat-exchanger, preparing warm water for the bleaching plant or for the showers on the wet end of the drying machine.

Thus, dumping as compared with blowing the cook results in a saving of sulphur and heat, both by better recovery and by the possibility of cooking at a higher density, the latter also compensating in production for part of the loss in time through dumping. Besides the difference in moisture content of the chips, previously mentioned, this difference in digester room operation seems to be one main reason why the consumption of sulphur per ton of pulp averages 50% higher on the Pacific Coast than in Sweden, the

price per ton of sulphur being about the same.

In Sweden and still more so in Finland there has been a tendency to cook at a higher pressure, which is claimed to give the advantage of faster cooking and less screenings with cooking acid of the same composition as used earlier. Some mills on the Pacific Coast have obtained the same result by cooking at normal pressure with an acid of high free sulphur dioxide content, 7-10%, thus being able to cook faster at the same or lower temperature than earlier and getting less screenings in the pulp.

Screening

● The round blow pits of wood, used on the Pacific Coast, are, because of their shape, more adapted to washing the pulp out of the pit than the rectangular dump chests of lined concrete, which are generally used in Sweden. By the old method the pulp is moved out of these dump chests by means of a shovel or a bucket elevator. During the last ten years, however, a new type of equipment has been installed in several Swedish mills, which automatically washes out the pulp by means of water under pressure, introduced through nozzles on a rotating vertical pipe in the middle of the chest.

The knotters in the mills on the Pacific Coast are mostly of a rotating, closed type, and also in Sweden rotating knotters are mostly used. It seems to be commonly accepted, however, that such knotters are less suited for the manufacture of clean pulp, as they easily cause breaking up of the knots by the rotation. In a few mills on the Pacific Coast flat screens are used as knotters and have proven to give very good results, but on the other hand they must be considered rather expensive equipment for this purpose. In Sweden vibration knotters have been installed in more and more pulp mills during the last few years. This type of knotter consists mainly of a trough, made of stainless steel plates, with about 15 sq. ft. bottom area, perforated with ¼" round holes. As the trough is vibrated at high frequency by means of an eccentric, the fibers pass together with spray water through the holes, while the knots are passing out over the end of the trough, on the side opposite to the inlet. Among the best features of this knotter are reliability, high capacity and gentle treatment of the knots.

Screening the pulp on the Pacific Coast is almost without exception done on flat screens. In Swedish mills centrifugal screens are also much in use, as they combine the advantages of easy operation and small space with good screening efficiency, on condition that they are operated with a sufficient overflow of pulp, which is screened on a tail row of flat screens. Several varieties of equipment for vibrating the flat screens are to be found in mills on the Pacific Coast as well as in Sweden, where also quite new constructions recently have been developed. In a Finnish type of hydraulic equipment, also used in Sweden, water under pressure is alternately moving the different membranes of the screen by means of a rotating valve at the point, where the pipes branch out to the membranes.

Drying and Baling

● For drying pulp both the ordinary type of drying rolls, Flakt dryers, vacuum dryers and even the older type of continuous wire dryers for shredded pulp are in use on the Pacific Coast. Drying rolls and Flakt dryers are also used in Sweden but so far no vacuum dryers. Blowing hot air into the pockets of pulp between the rolls in order to obtain a more uniform drying is used more on the Pacific Coast than in Swedish pulp mills. In these, on the other hand, more additional Flakt dryers with the pulp passing in vertical direction are used to increase the capacity of ordinary drying machines and to give the pulp a more gentle drying with air, since its dryness has previously been raised to 70-75% by drying on hot cylinders.

On the wet end of the drying machines some new developments have been made in Swedish pulp mills during the last years. To improve the effect of the couch, without using a vacuum roll, a rubber covered upper roll with deep grooves has brought good results. For preheating the pulp between the presses, it is passed through an aluminum box and heated with direct steam inside, which saves much space as compared with rolls previously used for indirect preheating.

The same method of baling in Swedish pulp mills differs somewhat from that used in Pacific Coast mills. In the former the wires are tied around the bale in the press, but in the latter the bale, after being pressed, is allowed to expand, before the wires are applied, often by means of an automatic wire binding machine. Moving the bale into and out of the press is a very easy matter in some of the mills on the Pacific Coast, where the stationary bottom plate has a number of holes, supplied with steel balls of a slightly larger diameter, which are forced up in the holes by air.

Machinery and Instrumentation

● For pumping white water and also pulp in the mills on the Pacific Coast there are, comparatively speaking, many vertical pumps used, either with the flow parallel to the shaft or pumps with ordinary type of flow in a vertical position. This arrangement is often practical in saving both foundation and suction pipe through the tank. Another mechanical feature, typical to the Pacific Coast, is that chippers, vacuum pumps and other relatively slow speed machines are directly run, often by synchronous motors, thus saving costs for foundation, bearings and belts.

Controlling and recording instruments, that work with air from central compressors, are preferably used in the mills on the Pacific Coast. Instruments for temperature, pressure, level and flow are used more than in Swedish pulp mills, which on the other hand are more extensively equipped with automatic controllers for the consistency of pulp, for instance ahead of screens, bleachers and drying machines. However, an interesting photoelectric controller for consistency below ½% has been developed in some mills on the Pacific Coast, and is working satisfactorily in controlling the pulp consistency on the rifflers.

Labor

● Contrary to wood, the labor is considerably more expensive on the Pacific Coast than in Sweden, the wages in the pulp mills having the proportion 4 to 1. This probably gives about the same proportion in cost of labor per ton of pulp, the mills being equally mechanized and in the same capacity range, except in the case of the two biggest sulphite mills in the world, for unbleached and bleached pulp, both situated on the Pacific Coast.

I wish to avail myself of this opportunity to express my most sincere gratitude for all the courtesy and hospitality, shown me during the three months I have had the privilege to spend in studying the pulp industry of the Pacific Northwest. It is a source of satisfaction, that in these troubled times there still exists a country, where there is so much cooperation and such sincere interest in a friendly exchange of ideas, aiming toward a peaceful development.

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Canadian Pulp, Paper Production Set New Record in 1940

Contributed $200,000,000 in United States dollar exchange to Canada's wartime economy — Gross value increased 43.2% over 1939, 141.4% over low point in 1933.

● British Columbia's pulp and paper industry set a new high mark for production and value of sales last year, and so did all other Canadian mills, but it remained for the Dominion Bureau of Statistics to tell the story in official figures.

These figures for the Canadian pulp and paper industry have just been issued. They show that:

Gross value of production in 1940 was $298,000,000—an all-time high.

Net value of production—$158,000,000—also set a record.

Cost of materials and supplies, amounting to over $108,000,000, establishes a new top.

Number of persons, 34,719, was of unprecedented proportions, while total salaries and wages broke new ground at $56,000,000.

Extent of these increases is best measured when expressed as percentages of the previous record year of 1929:

Gross value of products was up 22.2 per cent.

Net value of products up 29.9 per cent.

Cost of materials and supplies used up 11.2 per cent.

Employment up 1.5 per cent.

Salaries and wages 11.7 per cent higher.

Compared with other industries in Canada, pulp and paper ranked first with respect to wage and salary distribution, capital investment and net value of production.

It was second to the non-ferrous metals smelting and refining with respect to gross production and second to sawmills with respect to employment.

These returns are impressive, but the really great record of the industry last year was in making available $234,000,000 in foreign exchange, of which about $200,000,000 was in U. S. funds, for the purchase abroad of war material and supplies to further Canada's war effort.

From the standpoint of sustaining balance of trade, products of forest origin have been more consistent than any other group of commodities, and in the wood and paper group itself, the pulp and paper industry has become the chief contributor.

Elimination of the Scandinavian countries from the international market left Canada as the principal source of supplies for the world's democracies.

The Dominion Bureau of Statistics continues the story:

Export trade over the past year expanded at an amazing rate—increases of 100% or more over 1939 were common. Some of the more outstanding export gains follow:

	1940	1939
Newsprint	$151,360,196	$115,687,288
Paperboard	6,278,026	2,717,387
Wallboards	2,871,283	1,203,974
Wrapping paper	1,324,843	488,661
Bookpaper	1,053,780	510,581
Boxes, bags & cartons	628,096	191,979
Bond & writing pap.	470,786	119,137
Roof. & bldg. pap.	251,154	132,250
Tissue paper	423,197	.....

Big Advance Over 1939

● Considering only the maufacturing aspect of the industry or the manufacture of pulp and paper, gross value of production in 1940 was $298 millions. This represents an increase of 43.2% over 1939 and an increase of 141.4% over 1933, when production reached its lowest level.

Net production last year at $158.2 millions increased 53.4% over 1939 and was 178.1% over the lowest level of depression in 1933, but nearly 30% higher than the 1929 figure, establishing a new high for the industry.

Newsprint in Lead

● The 103 mills operating in 1940 (a net increase of three) produced $149 millions of pulp and $225 millions of paper.

Newsprint made up 81.1% of the total reported tonnage of paper manufactured in 1940. Newsprint produced amounted to 3,503,801 tons with a value of $158.4 millions, compared with 2,926,509 tons worth $120.8 millions in 1939, an increase of 19.7% in tonnage and 31.1% in value.

Canadian production of standard newsprint was over three times that of the United States in 1940.

Big Increases Recorded

● Increases were also shown in production of all other kinds of paper. That of book, writing and other fine papers rose to 13.9% in quantity and 21.5% in value.

Tonnage of wrapping paper rose 27.1% with an increase of 34.9% in value.

Boards increased 20.8% in quantity and 45.5% in value.

Tissue paper showed gains of 14.6% in volume and 21.2% in value.

Miscellaneous papers increased in quantity by 28.1% and in value by 30.5%.

More Pulpwood Used

● Apparent total production of pulpwood last year was 8,499,922 rough cords valued at $74.3 millions. This compares with 6,899,986 rough cords with a value of $58.3 millions in 1939, an increase of 23.2% in quantity and 27.5% in value.

About 82% of this cordage was manufactured into pulp in Canadian mills. The remaining 18% or 1,551,429 cords valued at $12.5 millions was exported to the United States.

In addition to the export of paper, the principal items of which are enumerated above, wood pulp exportations last year amounted to 1,068,516 tons with a value of $60.9 millions. This contrasts with 705,516 tons valued at $31 millions the year before, representing increases of 51.4% in quantity and 96.5% in value.

Canadian Pulp Production Up In July

● Production of wood pulp in Canada in July scored an appreciable gain over the preceding month's output, reaching a total of 467,607 short tons, air dry weight, of all grades except soda pulp, according to mills reporting to the Canadian Pulp and Paper Association which includes all but a small percentage of the producing capacity of the Dominion.

The July production was the largest by a sizable margin in any previous month this year, comparing with 432,671 tons in June, 448,524 tons in May, 424,559 tons in April, 418,807 tons in March, 365,823 tons in February and 391,530 tons in January of the current year.

The output in July comprised 49,483 short tons of bleached sulphite, against 47,713 tons in June, with 100 per cent of the industry's capacity reporting; 15,260 tons of strong unbleached sulphite, against 13,361 tons, 100 per cent of the Canadian mills reporting; 80,099 tons of news grade unbleached sulphite, against 72,086 tons, 100 per cent of the mills reporting; 35,389 tons of sulphate, against 33,216 tons, 95 per cent of the industry reporting, and 287,376 tons of ground wood, against 266,295 tons, 97 per cent of the mills in Canada reporting.

The report reveals that 340,390 tons of the July production was used by producing mills, contrasted with 312,207 tons in June, divided for July, 5,711 tons of bleached sulphite, 1,929 tons of strong unbleached sulphite, 50,183 tons of news grade sulphite, 19,343 tons of sulphate and 263,224 tons of ground wood. Shipments from producing mills, including those within Canada and for export to the United States and other countries, totaled 141,793 short tons, against 129,682 tons in the preceding month. Exports in July were 129,589 tons, comprising 41,811 tons of bleached sulphite, 15,943 tons of strong unbleached sulphite, 23,209 tons of news grade sulphite, 14,598 tons of sulphate and 34,028 tons of ground wood.

Stocks on hand at Canadian mills at the close of July totaled 60,453 short tons, compared with 75,028 tons a month earlier, and consisted of 11,758 tons of bleached sulphite, 6,586 tons of strong unbleached sulphite, 21,230 tons of news grade sulphite, 2,477 tons of sulphate and 18,402 tons of ground wood.

Camas Papermakers Get Paper Festival Trophy

● V. A. Davis, president of Papermakers local 130, Camas, Washington, was presented with a trophy in recognition of the union's victory in the 1940 and 1941 queen contests of the Camas Paper Festival. Mayor H. J. Woodworth presented the trophy in behalf of the Paper Festival board. Sally Stenehjem, 1940 queen and June Cox, 1941 queen received engraved sterling compote dishes.

SO_2 Recovery From Sulphite Vomit Stacks

by DONALD G. FELTHOUS*

ABSTRACT

All mills are vitally concerned in pulp production costs and savings in chemicals as they affect these costs. One method of making such savings is by the recovery of SO_2 from vomit stacks. Three systems for such recovery are discussed; two generally and one with details of construction, results and savings realized.

THE release of SO_2 gas from the vomit stack of a sulphite mill blow pit during the blowing of a digester has long been a source of annoyance and expense.

From the standpoint of actual dollars and cents, mill operators are faced with the irrefutable fact that every two pounds of SO_2 vented to the atmosphere represents one pound of sulphur lost. Even if a relatively small part of this is recovered it means a saving of thousands of dollars per year to the average mill.

In addition to these sulphur losses there are other losses brought about by the corrosive action of this gas on metals, paint, etc., which result in greater plant maintenance.

Blowing a Digester

● There is a wide range of conditions employed in the actual cooking of pulp depending on the results desired and equipment available.

It may be said, however, that in every instance of normal cooking it is a general practice to have a blow down period before a digester is blown, during which time pressure in the digester is lowered and SO_2 is recovered either in accumulators or in acid recovery tanks. The pressure at the end of the blow down period must be sufficiently high to insure a clean blow. In some instances it is necessary to blow down to a low pressure to recover the SO_2 and then resteam to build up sufficient pressure to properly blow the cook. In other instances where relatively weak liquor is used in cooking, the SO_2 active in cooking becomes so depleted as to necessitate blowing at relatively high pressure.

At the opening of the blow valve the digester charge flows through the blow line into the pit under the necessary pressure and at a temperature generally between 120° C. and 145° C. This temperature is lowered in the pit by the blow pit shower water if used during the blow. The final temperature of the mixture depends upon the amount and temperature of the water used and in all probability will be at least 100° C. The pit is, of course, at atmospheric pressure and therefore a certain amount of the liquid in the charge flashes off as steam and, theoretically, the "True Free" SO_2 should be released at once. During the blow this steam and gas, after sweeping the pit free of air rises through the vomit stack. The SO_2 present as bisulphite stays with the stock in the pit and a portion of the "True Free" is absorbed by the pit showers and is carried into the diluted stock on the pit bottom. Therefore in the stack itself there is present during the blow a mixture of steam and free SO_2 gas. If the steam is condensed the SO_2 may be recovered by absorption.

Available SO_2

● The questions arise as to how much SO_2 is present in the charge blown and how much is available for recovery.

Take, for example, the case of a digester having a capacity of 15 A. D. tons of pulp per charge which contains the following:

	Gallons
Acid pumped	35,000
Water as steam	6,250
Water in the chips	6,000
Total liquid to the digester	47,250
Relief from the digester	16,000
Liquor to blow pit	31,250

With a liquor test at the blow as follows: total 1.12%—0.16% combined—0.80% "True Free," the total SO_2 discharged to the blow pit is equal to

$$\frac{31{,}250 \times 1.12 \times 8.33}{100}$$

or 2820 pounds SO_2.

The SO_2 theoretically recoverable is the "True Free" which will be evolved from the liquor and stock in the pit, and in this case the total recoverable is equal to

$$\frac{31{,}250 \times 0.80 \times 8.33}{100}$$

or 2092 pounds SO_2. ("True Free" is taken as the SO_2 contained in a solution over and above that required for a bisulphite condition.)

As every one pound of sulphur combines with one pound of oxygen to form two pounds of SO_2 the total sulphur in the pit is 1410 pounds and the total theoretically recoverable is 1046 pounds, the sulphur equivalent to the "True Free." However, in the recovery systems checked in connection with this paper it was found that about 50% of the recoverable sulphur remained with the blow pit liquor. No attempt is made here to discuss the reason for this.

DONALD G. FELTHOUS, Discussed SO_2 Recovery

Theory of SO_2 Absorption

● It is not the purpose of this article to go into the theory of the absorption of SO_2 by water, but certain fundamentals must be observed in the design of any recovery system based upon such absorption.

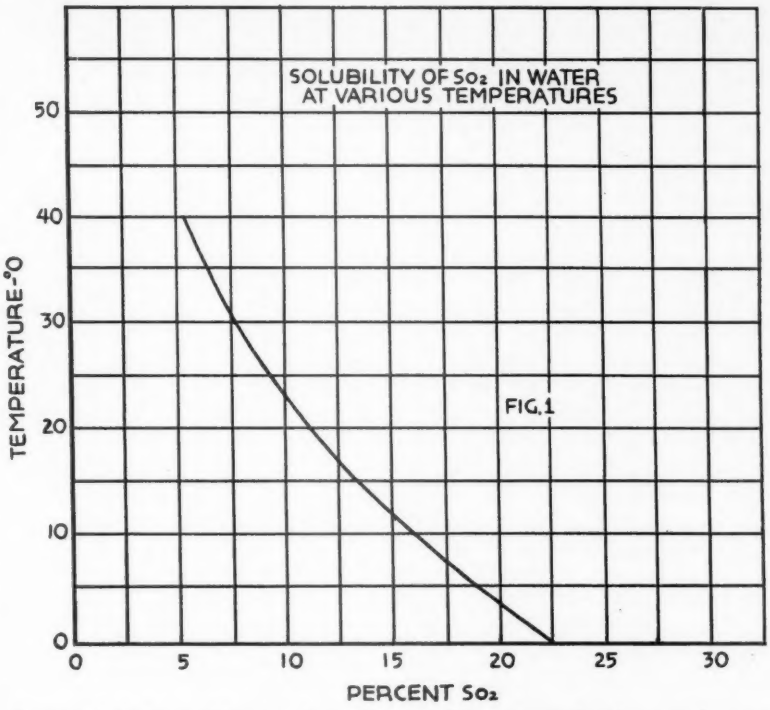
Water will absorb SO_2 only so long as the vapor pressure of the gas in solution is lower than that of the gas over the solution and will evolve SO_2 when the pressure over the solution is less than that within. Absorption is, therefore, affected by the following:

(1) Concentration of SO_2 gas
(2) Resultant water temperature
(3) Water volume as affecting final concentration

*Engineer, Longview Mill, Pulp Division, Weyerhaeuser Timber Company, Longview, Wash. Presented in competition for the Shibley Award at the Dinner Meeting sponsored by the Pacific Section of TAPPI, Everett, Wash., October 7, 1941.

(4) Contact area
(5) Time

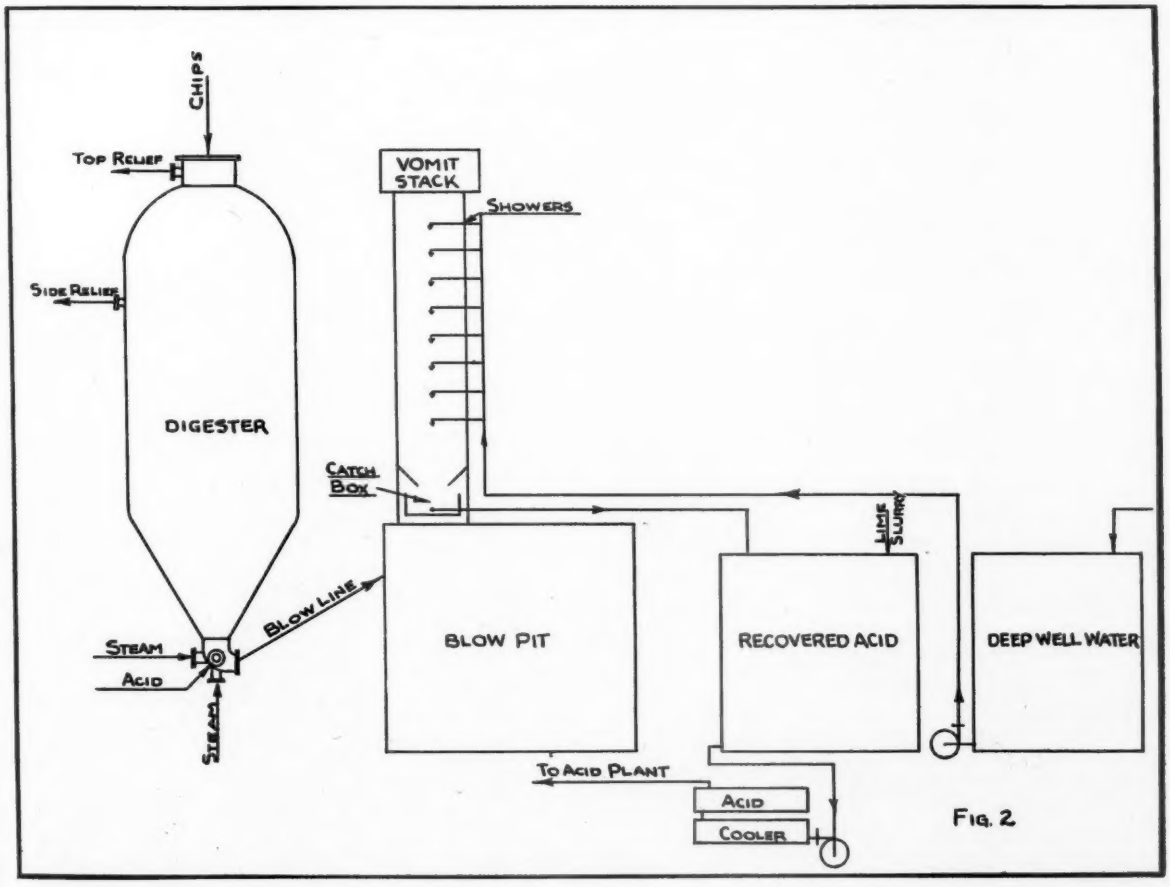
As the vapor pressure in the solution will rise with the rise in temperature, the absorbing power of the solution varies inversely as the temperature (see figure 1) and will, of course, vary directly as the volume and contact area of the water. Thus in any system in which absorption is accomplished by a water spray, it is of paramount importance that the water be relatively cool, the volume be sufficient, and the water be broken up as finely as possible to give the greatest area with the volume of water available. Time is not an important factor in this type of absorption as the contact time is of rather small duration.



Recovery Systems

● Many types of SO_2 recovery systems have been worked out and a few have been applied to mill practice with varying results. Three systems of interest will be discussed here.

One system employs the use of a jet condenser to condense the steam in the blow pit vent gases. This condensate then flows by gravity to a storage tank. As the temperature in this tank will be the highest at the top, it is from this part that the condensate at approximately 203° F. is pumped out continuously and circulated through a heat exchanger to recover the heat contained in it. The cooled condensate is returned



to the bottom of the accumulator tank at approximately 40° C. From the tank bottom the cooled condensate is then pumped to the jet condenser at system rate to act as the condensing medium while the excess is dumped to the sewer or pumped to some part of the mill where 40° C. water may be used profitably. The SO_2 passes from the top of the accumulator tank to a tower equipped with baffles and a water spray to remove entrained steam. The SO_2 from this tower is returned by a gas fan to the mill system. Thus it may be seen that this particular system not only separates the SO_2 gas from the steam in the vent gas from the blow pits but also makes available for other uses a portion of the heat contained in this gas.

Another system and one which is in use in a West Coast mill operates to allow the vent gas, while pasisng through a series of three towers on its way to the atmosphere, to be successively cleaned of its steam and SO_2.

As the entering vent gas in the first tower, tile packed, reaches a temperature of 90° C., water, thermostatically controlled to give sufficient volume to condense the steam and at the same time to remain at a temperature above that at which SO_2 is absorbed, is sprayed in the top of the tower and flows down over the tile countercurrent to the gas. This water is then wasted to the sewer.

For a period during the blow and shortly thereafter water is sprayed in the top of the second or absorption tower, also tile packed, and again flows down over the tile countercurrent to the SO_2 gas. The weak acid thus formed by the absorption of the SO_2 in the water is pumped to a storage tank and is added to the acid palnt weak acid flow in the top of the strong tower of a conventional two tower Jenssen system.

The last tower, limerock packed, serves only to remove small quantities of SO_2 still present in the gas before it is exhausted to the atmosphere. The water drained from this tower, which operates countercurrent as do the others, is wasted. An exhaust fan on this last tower pulls a slight vacuum on the system to counteract the gas friction losses present.

The system this paper is particularly describing (see Figure 2) is installed in a mill equipped with seven 15-ton digesters which are blown at 24 pounds per square inch pressure into circular wooden blow pits vented with round vomit stacks ten feet in diameter and sixty-five feet high. Each pit is equipped with five top showers, four spaced equally on a circle some 15 feet smaller in diameter than the pits and one over the target plate.

The cooking acid is made in a Jenssen two tower plant at an average rate of approximately 220 gallons per mniute. The plant is also equipped with a pressure absorption tower.

The digesters are on a schedule of one hour thirty minutes spacing and actual blowing requires from ten to fourteen minutes.

The system, in brief, consists of a means of absorbing the SO_2 in the blow gas by water sprays in each vomit stack, collecting and storing the weak acid formed and introducing it as make up in the acid plant.

Eight solid cone shower nozzles, the first placed 12 feet above the pit top and the balance spaced about 6½ feet apart vertically, to give complete coverage, are installed in each stack.

During the blow deep well water at 11° C., stored in a 50,000-gallon tank, is pumped to these showers. Nozzle and pipe sizes are so chosen as to deliver the total water flow of 1850 GPM in eight diminishing parts beginning with 300 GPM at 5 lbs. presure to the top nozzle and stepping down by as equal increments as possible to 110 GPM to the bottom one. Thus the largest volume of water falls the greatest distance. Based on an average showering time of 10¾ minutes per blow and ninety minute digester spacing, with no water losses, this gives a system rate of recovery of 220 GPM of weak acid which is the acid plant demand rate. Recovery of the shower

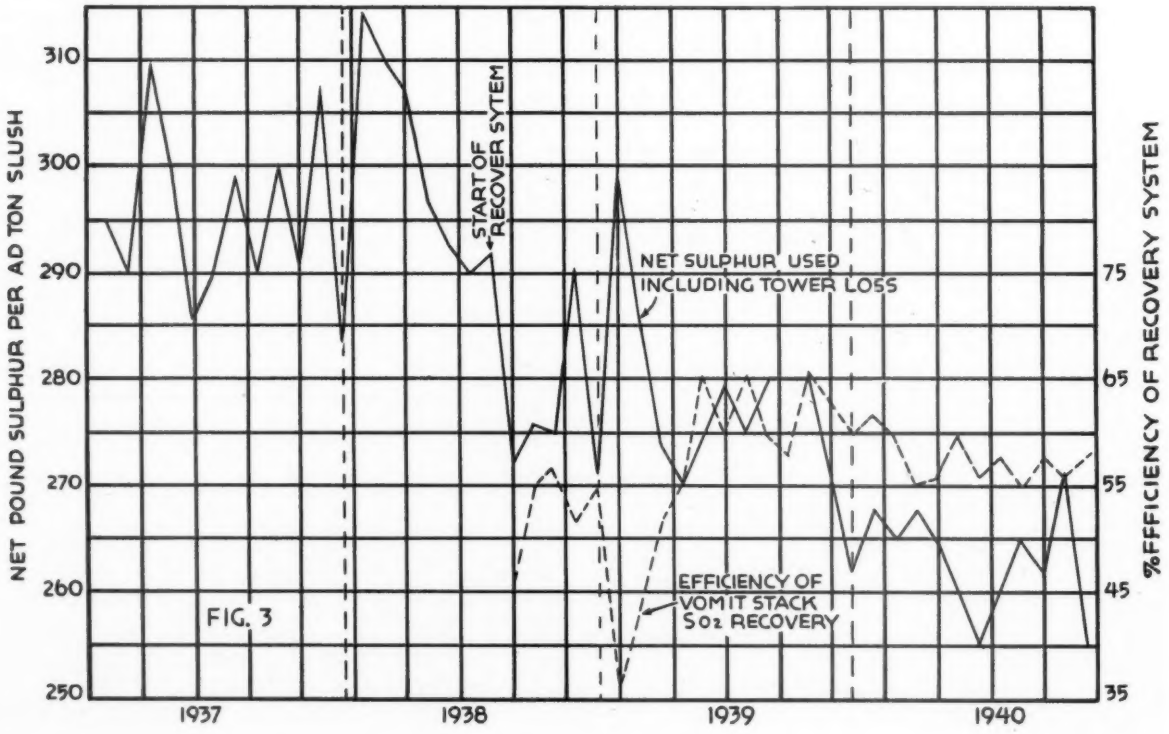


FIG. 3

water is accomplished by means of a catch box at the bottom of each stack with a funnel-like deflector above to direct the water into the box. The size and shape of the box and the spacing of the deflector above is so designed as to form a minimum of obstruction to the passage of the vent gas up the stack. Each box is joined to a common 12-in. pipe header set lower than the box to prevent backing up of water from one box to another and the recovered weak acid flows through this header to a 108,000-gallon wood stave storage tank. From this tank it is pumped at a maximum temperature of 41° C. at acid plant demand rate through an eight pass cooler. Here it is cooled to about 15° C. and delivered to the acid plant as make-up.

Construction Materials

● Of interest to any mill which might contemplate the installation of such a recovery system are the experiences encountered in trying various materials for pipe fittings, etc., which would withstand the acid conditions and alternate heating and cooling. The first fittings installed were fabricated steel, rubber covered, but due to softening of the rubber after short service they were removed and replaced with lead lined fittings. The temperature changes encountered caused this lead to creep and crack and it was found necessary to replace the entire fittings with those made of fabricated KA_2SM_0. The latter have been in service over three years without failure.

● Tests have been made on the operation of the system giving the following results:

Condition.	Average Blow Time	Average SO_2 Solution Strength	Average Lbs. of Sulphur in Dig.	Average Lbs. of Sulphur Recovered	Average Per Cent Recovered	Av. Temp. During Blow	Av. Max. During Blow
Stack Shower Only	12 min.	0.57%	846	457	56%	54°C	72°C
Stack Shower Plus Blow Line Water	12 min.	0.48%	998	401	41%	34°C	40°C
Stack Shower Plus Back Center Pit Shower (target show.)	8 2/3	0.69%	861	414	49%	39°C	68°C

It will be seen from the above that the combination of stack showers and one pit shower was optimum in that it gave good recovery combined with relatively low acid temperature.

It also was found that the stack showers had the following effect on the concentration of the effluent gas leaving the stacks:

Blow.	Regular Pit Showers On	Pit Showers Plus Stack Showers
Start of Blow	28% SO_2	1.8% SO_2
Middle of blow	50% SO_2	2.4% SO_2
End of blow	22.5% SO_2	1.3% SO_2
Average	33½% SO_2	1.8% SO_2

Or an absorption of about 95% of the SO_2 going to the stack. The 1.8% SO_2 noted above did not indicate a true loss, as due to shrinkage of the stack contents when the steam is condensed, there is no measurable gas flow from the stack. Although experience shows that best operation is obtained with only one pit shower turned on, as noted, the above tabulation is included to indicate the absorbing qualities of the water spray in the stacks. As long as these stack showers are operating, no noticeable SO_2 odor is present even a few feet from the top opening during a blow.

After putting the system into use, it was found that the vapor pressure of the SO_2 in the recovered acid as introduced into the top of the weak tower was greater than that in the spent burner gas at that point which resulted in stripping the recovered acid of SO_2 with an increase in Jenssen tower losses. Investigation revealed that for each 0.10% increase in true free in the recovered acid, the tower sulphur losses increased 415 lbs. per day. Experiments were conducted which indicated that for each 200 gallons of 8% lime slurry added to the recovered acid at the blow the combine increased 0.10%, the free decreased a like amount and the true free decreased 0.20%. On adding at each blow what was deemed an economically practicable amount of 400 gallons of slurry the tower loss dropped from 3000 lbs. to 700 lbs. of sulphur per day.

In another mill it might have been advantageous to run the recovered acid through a limerock tower before cooling instead of adding slurry, but as the equipment for making and pumping this slurry was available the latter was more feasible in this particular case. A new mill would undoubtedly find the rock tower preferable.

The savings effected by the installation of a recovery system can in part be very easily calculated. They may be found by balancing the price of the sulphur recovered against the cost of equipment amortization, taxes, operation, maintenance and chemicals, such as lime, required by the system.

It will be of interest to know that from the standpoint of chemicals saved alone, the system above described gave the following results during 1940:

Total pounds sulphur recovered per day	8,345
Total pounds of sulphur recovered per ton A. D. slush	33
Average tower loss per day in pounds sulphur	692
Less former loss per day	121
Increase in Jenssen tower loss per day	571
Net pounds sulphur recovered per day (see figure 3)	7,774
Net pounds sulphur per ton A. D. slush	30.7
Pounds lime used per day	4,022
Pounds lime used per ton A. D. slush	15.8

As every 56 lbs. of lime as CAO replaced 100 lbs. pure $CACO_3$ lime rock in the acid plant the 15.8 lbs. above replaced 28.3 lbs. $CACO_3$. Thus with prices of $4.50 per ton for $CACO_3$, $16.00 per ton for CAO and $24.00 per ton for sulphur the savings would be

$$\frac{30.7 \times 24.00}{2000} - \left(\frac{15.8 \times 16.00}{2000} - \frac{28.3 \times 4.50}{2000} \right)$$

or 30.5c per ton A. D. slush. On this basis a mill producing 200 tons per day would save $61.00 per day in sulphur.

In addition to the above savings certain intangible benefits are realized, such as increased employee goodwill and efficiency due to the lack of gas in the mill buildings and savings in maintenance on equipment normally attacked by the vented gases, which may only be realized over a period of years.

Conclusions

● The recovery system as particularly described was installed in an existing mill and proved workable, economical from a capital investment standpoint and made possible a saving of 30 lbs. of sulphur per A. D. ton of pulp.

Each mill has its own particular reason for being interested in SO_2 recovery. One may be faced by the obnoxious gas problem, another by lack of acid plant capacity where a saving in sulphur used might obviate the necessity of additional burners, etc. All are, of course, vitally concerned in pulp production costs and savings in chemicals used as they affect these costs.

Each mill must also ascertain what type of system may be most economically fitted into its construction and recover the SO_2 in a manner best adapted to its particular plan of operation.

Is "Oil Shortage" Smokescreen For Full Federal Control?

● Since fuel oil is the auxilliary fuel employed by pulp and paper mills in the Pacific Northwest to supplement hogged fuel, the following interview of James A. Moffett, chairman of the board of California-Texas Oil Company, is of interest. The interview appeared in the October 6th issue of the Pacific Coast edition of the Wall Street Journal.

"WASHINGTON—Full federal control of the oil industry may be the motivation behind Government claims of a petroleum shortage, James A. Moffett, board chairman of California-Texas Oil Co., observed last week-end.

"He also disputed the statements made to the effect that there is a present shortage of oil and added that, if there should be one, it could be corrected almost immediately.

"Mr. Moffett also declared he had information that the British have offered and are anxious to return tankers borrowed from American operators for American domestic requirements and that these tankers have been sent to the Dutch East Indies, South America and Australia under orders of Mr. Ickes office.

"Refusal to permit those tankers to return to original routes automatically continues the threat of a shortage, according to Mr. Moffett.

"The United States should take back immediately six tankers much needed for the Pacific Coast "where another unnecessary shortage is being created," he asserted.

"The situation is bad on the Pacific Coast, he claimed. Operators there, he asserted, have contributed 38% of their total tonnage to war-aid purposes, while the Atlantic seaboard operators contributed only 18%. Tank cars could not be used as efficiently in the West, he explained, because the Southern Pacific Railroad only has a single track line running most of the way from San Francisco to Portland, Ore. The southbound traffic is so heavy and, with troop movements added, it is not possible to move oil products northward, he said.

"Mr. Moffett's remarks, made at a special press conference, introduced a new element into the current controversy about the claimed petroleum shortage. A two-way fight has been going on for weeks between Petroleum Coordinator Ickes and President J .J. Pelley of the Association of American Railroads as to whether there are sufficient tank cars to haul needed supplies to the Atlantic seaboard.

"To some extent, Mr. Moffett seemed to be siding with Mr. Pelley. At least, he expressed the view that Mr. Pelley should be allowed to run the tank cars. But he also said the dispute over idle cars was a play on words.' The real issue, he averred, is whether tank cars are fully utilized.

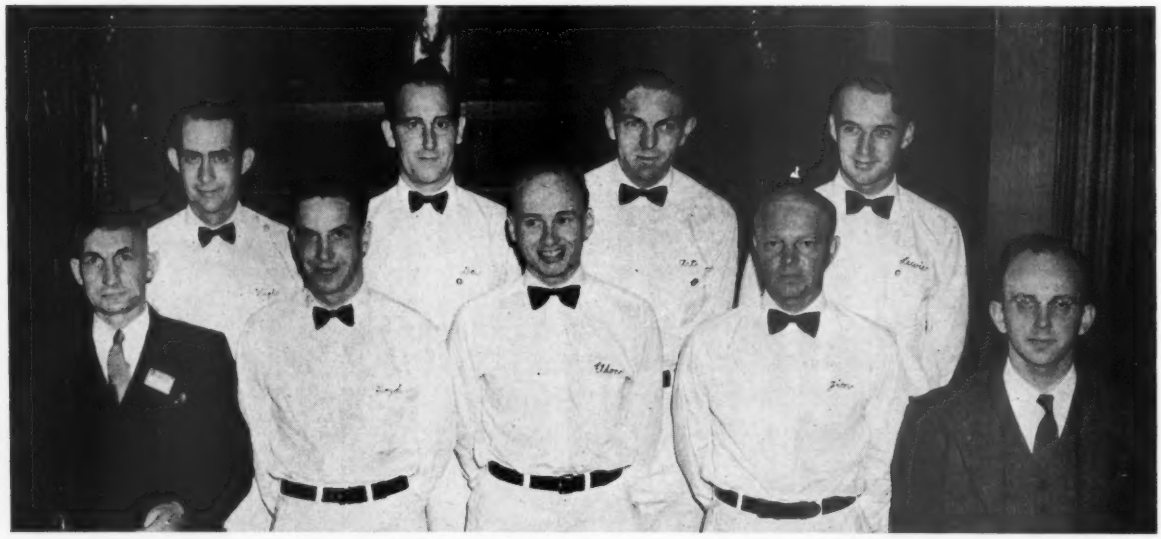
"That the emphasis placed on the oil shortage by Secretary Ickes might be merely a smokescreen to hide efforts to get oil industry control was indicated by Mr. Moffett in response to a question from one of the newsmen. He made no reference about it in either of two prepared statements which were distributed to reporters. When he was asked what he thought was back of the oil coordinator office's claim of a shortage, he replied with a query worded like this: Do they want to disrupt the industry to bring about full federal control?

"Better use of tank cars could solve the supply problem in the East, Mr. Moffett asserted. 'Disregard the present petty squabble on the tank car subject and look at the record,' he said. 'In 1917, 57,000 oil tank cars transported 3.5 million tons of petroleum products; 23 years later, 1940, 148,000 tank cars moved only 60 million tons of petroleum products. Two and sixteenths times as many tanks cars as in 1917, moving only twice as much oil.

" 'If we were now doing only as well as we did in 1917 we would be moving 80 million tons a year instead of 60 million tons . . . and if we were smart as we were in 1917 this extra 20 million tons of petroleum products moved would mean an extra 383,000 barrels of oil daily. The shortage created by British needs and the loan of our tankers to the British created a shortage of only 200,000 barrels daily, according to the statement of the petroleum coordinator.' "

Holzer and Yocum Visit Ocean Falls

● Dr. W. F. Holzer and T. L. Yocum, both of the central technical department of Crown Zellerbach Corporation, Camas, Washington, spent two weeks at Pacific Mills, Limited, Ocean Falls, B. C., starting September 15th. They made the trip as consultants on some technical work.



The FIRST AID TEAM of RAYONIER INCORPORATED, TACOMA DIVISION, staged a demonstration before the Western Safety Conference in Seattle, September 25th , , , Nearly 500 attended the foremen's and supervisors' session which was presided over by OTTO R. HARTWIG, Social Security Adviser and General Safety Supervisor for Crown Zellerbach Corporation and Rayonier Incorporated.

Members of RAYONIER'S TACOMA DIVISION TEAM , , , Back row, left to right, HUGH BEVILLE, DONALD WELSH, ARTHUR CHRISTENSEN, LEWIS SOUTH , , , Front row, left to right, FRED PONTIN, Supervisor of First Aid Instruction, Crown Zellerbach Corporation and Rayonier Incorporated; BOYD WILLEY, ELDON ANDERSON, JAMES FLAPAK and RONALD E. FETTERLY, Personnel and Safety Supervisor, Rayonier Incorporated, Tacoma Division, Tacoma, Washington.

Camas Men Participate In Salmon Run

● A. G. "Buff" Natwick, assistant resident manager; Tom Goodwin, paper inspection supervisor and Clarence Shaw, paper inspector, all of Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, Camas, Washington, were fishing at Celilo Falls September 7th to 11th.

Rumor has it that the trip was more successful than last year's trip to the falls.

According to "Buff" Natwick, each man caught his legal limit and, "did not dicker with the Indians for fish." In fact he states, "We never did and never shall have to dicker with them for fish, rumors notwithstanding."

Joe Scheuerman of Cameron Machine Calls on Coast Mills

● Joe Scheuerman of Chicago, sales engineer for the Cameron Machine Company, Brooklyn, New York, spent several weeks visiting mills on the West Coast during September. He was accompanied by Mrs. Scheuerman. They drove directly from Chicago to Portland and then down the Coast to Los Angeles before heading for home by way of the Southern states.

Mr. Scheuerman reported that Cameron was very busy producing a large number of machines for defense industries as well as continuing their production of winders for the paper industry. In the last year the Cameron Machine Company has received orders for the following machines from Pacific Coast mills, most of which have been shipped and installed.

A new Type 12 86-inch winder for Pacific Paperboard Company, Longview; a 62-inch high speed winder with electric eye side register control for the Pacific Waxed Paper Company, Seattle; a 72-inch Type 10 Model 6 winder equipped with constant tension device and electric eye side register control for the Western Wax Paper Company, North Portland, Oregon; a 142-inch constant tension winder for the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation at Camas, Wash.; a 62-inch constant tension, electric eye equipped winder for the Gummed Tape Division of Western Wax Paper Company; two Type 14 winders behind paper machines for the Everett Pulp & Paper Company, Everett, Wash.; a Type 14 winder to go behind a paper machine for the Inland Empire Paper Company, Millwood, Wash.; a constant tension and electric eye for installation on the back of a Cameron winder in the Western Wax Paper Company, Portland.

A Type 14 winder for the finishing room at the Longview Fibre Company, Longview, Wash., and a 94-inch winder for the asphalt laminating machine for the same mill; a Type 18, sheer cut winder for the Pioneer Division, The Flintkote Company, Los Angeles; a Type 10, Model 6, constant tension, electric eye equipped 1500 feet per minute winder for the Adhesive Products Company, San Francisco; three constant tension devices and electric eyes, two on winders and one on a waxing machine, for the Western Wax Paper Co., Oakland; a Type 10, Model 14, winder for Fibreboard Products Inc., at Antioch, Calif.; and a Style B constant tension device on a Cameron rewinder for Fibreboard Products, Inc., Vernon, Calif.

Walter Hodges Dies From Injuries Received in Auto Accident

● The many friends of Walter Sherwood Hodges from Ocean Falls, B. C., to Los Angeles, were saddened to learn of his death in Portland October 8th, from injuries received in an auto accident near Madera, California, August 21st.

Walter Hodges had devoted his life to the pulp and paper industry on the Pacific Coast and his kindly personality brought him a host of friends in the industry he loved.

One long-time friend, David J. Goldsmith, secretary of the Crown Zellerbach Corporation, said:

"Walter Hodges and I worked together in the purchasing department of the Crown Willamette Paper Company for many years. For a long while he specialized in machine clothing and later succeeded me as purchasing agent in Portland. Walter was hard working, analytical and sound. Always the gentleman, he was the personification of integrity. His sudden and untimely passing is a shock to all of us who knew him well and the members of the Pacific Coast industry have lost an esteemed friend, a trusted and valuable worker."

While he was driving back from a business trip to Los Angeles, a drunken driver pulled out suddenly from behind a large truck and hit his car in a head-on collision. Walter was taken to the hospital in nearby Madera, California, and found to be suffering from a broken knee cap, two broken ribs and a broken nose. Early in September he was thought sufficiently recovered to make the trip home by train. After a week at his home at Tualatin Meadows, Oregon City, severe headaches developed and his physician ordered him into the hospital for observation. An operation was performed the latter part of September but Walter failed to show improvement and passed away on Wednesday, October 8th.

When he was 16 Walter Hodges came to Oregon from Abilene, Texas, where he was born. His first work was for the Bridal Veil Lumber Company at Bridal Veil, Oregon. Later he went to Arizona and New Mexico where he had charge of bookkeeping for a large cattle ranch.

He had been interested in the manufacture of paper from an early age, so in 1912 he returned to Oregon and went to work at the West Linn mill of the old Willamette Pulp & Paper Company. He worked up through the research and purchasing departments.

After being with the company for 14 years, half of which was spent in the Portland office under the late A. J. Lewthwaite, resident manager, he resigned on October 1, 1926, leaving the position of purchasing agent to go into business for himself.

He became Pacific Coast representative for several machine clothing manufacturers and traveled from Ocean Falls, B. C., to Mexico in their interests. At the time of his death Walter Hodges represented the Appleton Wire Works of Appleton, Wisconsin; the Orr Felt & Blanket Company of Piqua, Ohio; the Asten-Hill Manufacturing Company of Philadelphia; and, the American Wringer Company of Woonsocket, R. I. In Canada he represented the American Wringer Company and the Capital Wire Cloth Company.

For many years he took and active part in the Pacific Section of TAPPI of which he was a member. He was chairman of the registration committee for the Fall Metting in Portland in 1934 and served a secretary of the Pacific Section for 1934 and 1935.

Walter Hodges was a member of the Sunnyside Blue Lodge, the Scottish Rite, and Al Kader Shrine, and was a past patron of the Order of Eastern Star. He belonged to the Oswego Golf and Country Club.

Surviving are his widow, Inez, and a daughter Adele Sue. Services were held in Portland on Saturday, October 11th.

Little of Anglo-Canadian Coast Visitor

E. M. Little, director of Canada's Wartime Bureau of Technical Personnel, who in private life is general manager of the Anglo-Canadian Pulp & Paper Mills in Quebec and president and general manager of the Gaspesia Sulphite Company of Chandler, Que., has been visiting Pacific coast pulp mills, renewing old friendships in the industry and making a personal survey of western progress.

Mr. Little's chief interest today, however, is mobilizing Canada's manpower for war industry, segregating the available men according to technical classification and providing training facilities for unskilled men capable of taking their part in war production.

British Columbia Mills Feel Materials Shortage

● Pulp and paper manufacturers in British Columbia are beginning to feel the pinch of priorities in getting their equipment and supplies not only for new expansion projects but for day-to-day requirements.

Representations have been made to the steel controller and other Canadian government officials with a view to getting preferred treatment for the needs of the pulp and paper industry because of its importance economically to Canada's war production.

Almost every important pulp and paper organization in British Columbia is currently engaged in some form of construction. B. C. Pulp & Paper Company is going ahead with its Lois River dam and sulphite plant; Sorg Paper Company is installing new equipment at Port Mellon and Westminster Paper Mills and Sidney Roofing & Paper Company have also been doing some building.

Pioneer-Flintkote's Research Laboratory Nearly Finished

● The new research laboratory being built b ythe Pioneer Division, The Flintkote Company, Los Angeles, will be finished in a few weeks.

Adequate space has been provided for the several laboratories and when Dr. John Stanko, research director, moves in with his staff they will have the latest in equipment for paperboard, roofing and shipping containers.

Cupples Operating Los Angeles Paper Bag Co.

● The plant of the Los Angeles Paper Bag Company, Los Angeles, California, which was purchased June 20th of this year by the Cupples Company of St. Louis, Missouri, is operating at maximum capacity, producing a general line of kraft bags. Output of the plant which was formerly operated by Jack Nelson, is sold in the State of California.

Prior to the buying of the plant the Cupples Company represented the Union Bag & Paper Corporation, selling the production of the Los Angeles b a g plant. When Union Bag decided to withdraw from bag manufacturing on the Pacific Coast last Spring, due to inability to obtain cargo space for shipping bag paper from Savannah to Los Angeles, Cupples entered the converting field by the purchase of the Los Angeles Paper Bag Company.

President of the latter company is G. B. Metz, vice president of the Cupples Company, St. Louis. J. K. Wallace is vice president of both companies and Howard Ruweler of the Cupples Company, San Francisco, is vice president of the Los Angeles firm. Charles Spies, Cupples Company representative in Southern California, is secretary-treasurer of the bag concern.

G. S. Brenzel, factory manager for Los Angeles Paper Bag Company, was formerly manager of the Union Bag & Paper Corporation's Los Angeles plant, and the Union Bag plant at Vancouver, Washington, which was moved to Los Angeles several years ago.

The Cupples Company continues to represent the Union Bag & Paper Corporation in the territory from Denver east.

G. S. BRENZEL, Factory Manager, and CHARLES SPIES, Secretary-Treasurer, of the LOS ANGELES PAPER BAG COMPANY, purchased in June by the CUPPLES COMPANY of St. Louis.

Jerry Alcorn Proves His Marksmanship

● Jerry Alcorn, plant engineer, Everett Mill; D. K. Macbain, plant engineer, Longview Mill; Herb Peterson, instrument man, Longview Mill, Pulp Division Weyerhaeuser Timber Company; and L. H. "Verne" Wear, Pacific Northwest representative for the Taylor Instrument Companies, went deer hunting in the Steens Mountains of southeastern Oregon September 26th to October 4th.

Each man got his deer but Jerry Alcorn gets the headline for his marksmanship. The other three say that a checkup of ammunition after Jerry killed his deer showed 25 rounds missing. In line with their engineering training the men solved the mystery through a scientific approach. They examined the deer and found one bullet, concluding that the other 24 must have missed. Upon presenting this irrefutable evidence to Alcorn he readily admitted that he was a very fast rifleman and it was quite possible he could have fired 24 shots while the deer stood fascinated, the 25th intentionally concluding the exhibition of exceptional speed.

Keith Macbain likewise delivered the goods and the twenty members of the Weyerhaeuser Longview Mill foremen's group are highly pleased with his success. At the last meeting on September 18th they unanimously selected Mr. Macbain as a committee of one to provide the meat course for their October dinner.

The Steens Mountains were picked by the expedition for deer are plentiful there and, as it is open country, it is rather difficult for a hunter to make up a good alibi for bagging another hunter instead of a deer.

Papermakers Camas Local Buys Defense Bonds

● The Papermakers Union local 130, Camas, Washington, has contributed to the support of national defense by purchasing $2,500 worth of defense bonds. The money was taken from the local's building fund.

Pioneer-Flintkote Wins Safety Awards

● The Pioneer Division, The Flintkote Company, Los Angeles, won the Paper Industry's Annual Safety Contest for large roofing mills for the period from July 1st, 1940, to June 30th, 1941, with a record of but 3 reported injuries and 1,434,475 man hours worked. The frequency rate was 2.09.

Early in October Ernest Dutcher, safety engineer, Pioneer Division, attended the National Safety Congress in Chicago and received the plaque for top honors.

The Pioneer Division also won top honors in The Flintkote Company's interplant safety contest among its six plants for the fifth consecutive year, with a frequency of 1.64 and a severity of 0.260. An average of 623 employees worked 1,221,404 hours during the period of the contest, January 1, 1940, to December 31, 1940.

The management of The Flintkote Company of its Pioneer Division in Los Angeles, does everything possible to promote safety considering it is fundamental to the successful operation of its plants.

The Use of Bleachability Tests In the Marketing of Pulp

by REX VINCENT*

THE growth of technical knowledge and its uses generally follows a broad pattern. There is first the accidental or searched-for discovery which is followed by a period of slow development or refinement until someone puts it to practical application. It then spreads through various phases, until it becomes commonplace. Today, physical tests of pulp are commonplace in that they are widely used, the nomenclature is well established, and everyone expects that pulp will be tested before it is used. The tests themselves, aside from grading and evaluating pulp, have brought much information to light simply through the data and familiarity arising from them. They have broadened out until today instead of simply mullen, tear, and freeness, there is classification by screens, fold tests, age tests for durability of physical strengths, hydration determinations and many others. All these have piled up a wealth of information and one item in that pile is that physical tests alone are not sufficient to evaluate pulps. Too often pulps have turned up with identical physical characteristics but with subtle differences that become apparent when they were converted into paper. Chemical tests have been applied and with the impetus afforded by the rayon industry, are gaining in acceptance and use.

There are many chemical tests that can be applied to woodpulp for the determination of its characteristics. We have, today, sufficient procedures to analyze almost completely any particular type. These tests include bleachability by several procedures, copper number, alpha content, pentosan content, lignin, noncellulosic impurities and many empirical procedures confined to one or two plants. These, however, narrow down to several when their use is restricted to pulp for the manufacture of paper. The only chemical tests commonly in use for grading purchased pulp today are those for bleachability and copper number and the former far outranks the latter. Even so, this determination of chemical characteristics, outside of mills producing pulp, is fairly recent, having only been in practice on the buying and grading end for about 8 to 10 years. Prior to that time, pulp quality was determined entirely by physical tests such as mullen, tear, fold and freeness. Even this was not general as many small mills did not possess the necessary laboratory equipment and others were convinced that the information forthcoming from the laboratory was not of any value. Pulp was purchased by the buyer principally on the reputation of the mill that produced it and as it became known to him through actual conversion into paper. The seller of pulp was required to know which pulps each and every mill considered the best for their own use and it was found that not many mills making the same kind of paper agreed on the pulp to be used. As technical knowledge increased in the production of wood pulp, it began to creep downward into the consuming end and buyers were presented with several different qualities from the same mill where previously they were faced with only one. Also, competition made it necessary to secure the cheapest pulp that would satisfactorily fill the bill. These factors made laboratory information valuable since it enabled the buyer to pick and choose among the many different brands and qualities offered to him.

Domestic Industry Aided Use of Tests

● This information, accumulated over several years, made it obvious that pulp quality was of a very fluid nature and subject to constant change and improvement. The pulp from any one mill would undergo changes from year to year as the mill made improvements, installed new equipment or began working new sections of timber. Along with these ordinary changes the domestic pulp industry began to operate to such an extent that its tonnage became significant in the American market, and, with this source, the development of technical information was made much easier. During this period, and because of the easy movement of American pulps, attempts were made to peg what had previously been very general names with reference to pulp qualities.

Pulps had been classified as strong, prime strong, prime special, second quality, or easy bleaching with all sorts of number and letter combinations to designate a particular group of charactertistics. The words "prime" and "strong" meant the best grade of pulp that any particular mill made and had no meaning at all in comparison with the prime or strong pulps from another mill. A prime strong pulp from mill A might not be at all comparable to the prime strong pulp from mill B. Nevertheless, both of them bore the same name and the tendency was to place them in the same category. They might be differentiated a little further in some cases by saying that one was a soft pulp and that the other was hard. This was confusing in that the word "hard" did not necessarily mean that the pulp was hard itself, in the usual meaning of the word, or that it produced hard papers or that it was hard to beat off, it meant different things to different people and one had to guess what any particular buyer might mean by the word "hard." The same thing applied to "soft." The first means to give these words a definitive meaning was the measurement of oxidizable materials in the unbleached pulp by determining directly the amount of chlorine absorbed, known as the Roe method. This was a rather complex and lengthy method as it depended on the actual absorption of chlorine by the pulp at a controlled moisture content and temperature. However, it was used quite widely by the producing mills in Sweden for grading their pulps as they came off the end of the drying machine and one mill producing kraft pulp, graded a range from a Roe number of 7 down to a Roe number of 3. They added a nought to this number and spoke of qualities 50, 60, 30, etc. This was such an advancement in the means of designating and discussing the hardness of pulp, which by this method was automatically confined to the rawness or degree of cooking, that consuming mills tried to adapt the process for their own use. This resulted, through efforts to simplify the procedure and adapt it to the

*Bulkley, Dunton Pulp Company, Inc., Chicago, Illinois. Presented at the Fall Meeting of TAPPI, Ann Arbor Michigan, September 16-19th, 1941.

ordinary paper mill laboratory, in the acceptance of the Wiles Permanganate number procedure which measured the oxidizable substances by the use of potassium permanganate.

Per Cent Bleachability

● There were any number of methods used in between and so far as can be learned, are still used. The writer has a chart showing the conversion of 10 different chlorine numbers to the standard Roe number. However, now we find that most American mills, both producing and consuming, are using the permanganate procedure because of its speed, simplicity and reasonable accuracy. This result is converted into the chlorine demand, the chlorine number of the bleachability expressed in bleach powder. The confusion today rests almost wholly in the manner in which the permanganate number is finally expressed as indicated above. Some mills who are bleaching pulp for convenience sake express it in per cent chlorine demand and talk about pulp from that basis. Others simply maintain the permanganate number as such without converting it to any corresponding chlorine figure. Still others convert it to the bleach powder basis and speak of it as per cent bleachability. We have found that the latter is the most easily understood by buyers and executives in paper mills and by the consistent use of it there has grown up a language which has to a large extent removed the old haziness surrounding the words, "hard," "soft," and "strong."

Today, in discussing any pulp or any particular quality of a pulp the words "hard," "soft," and "strong" are still used but they are confined and limited by various descriptions of their bleachability. Right along with these words, other adjectives such as "easy bleaching" and "bleachable" have come into use and growing up with this has come a classification of use requirements largely by the per cent bleachability. For example, strong domestic pulps will have bleachabilities ranging from 20 down to 17, the bleachable grade will run from 17 down to 14 and the easy bleaching from 14 as low as 10. It should be mentioned here that these bleachabilities refer strictly to American West Coast pulp. Scandinavian pulps in the same classifications, that is, strong, bleachable and easy bleaching will run considerably higher in per cent bleachability. It is not uncommon to have Scandinavian pulps in the bleachable range with bleachabilities as high as 22 to 25.

In discussing the use requirements of the pulp, there is taken into consideration whether it is to be used as a straight unbleached or whether it is to be bleached in the paper mill. If the pulp is to be used as a straight unbleached, the bleachability is used as a guide for strength and resistance to beating. We have learned that a pulp with a bleachability of about 17 will have greater strengths than one of 14 and will take on water of hydration faster. If the mill is not equipped to beat the pulp properly and to get out of it the potential strength that is there, they must sacrifice some part of the potential strength and move down to a bleachability in the neighborhood of 15. This middle range, that is, around 15, has been found to be the one quality which will satisfy the broadest range of requirements. This pulp can be used in book paper, paper boards, or a wide range of specialties. In certain grades of groundwood papers where the fibre must be kept as free as possible it is necessary to go as low in bleachability as 10 or 11. Here it is desired to keep the fibre as free as possible while at the same time softening and wetting it so that it will form smoothly and flatly into a sheet.

The lower bleachabilities indicate a more purified fibre which will not take on water as rapidly as those in the higher ranges. Conversely, where a large amount of hydration is required, as in greaseproof and glassines, it is necessary to go as high as 19, or higher. Incidentally, one of the latest improvements in the West Coast pulps has been the production of an unbleached sulphite which has a bleachability of 19 and is relatively free from shives. Thus, we find that on the low end and high end of the scales, the pulp is restricted to rather special uses and that in the middle range, from 14 to 17, it can go into any number of papers. If the pulp is to be bleached in the paper mill, a net set of requirements must be considered, the foremost of these being the amount of chlorine required to get a good commercial white. Most mills are satisfied if this figure is in the neighborhood of 5 per cent chlorine and this figures into a bleachability percentage of approximately 15½. This again falls into the middle range which was mentioned above.

Now, it is quite possible to have two pulps of the same bleachability but with different strength characteristics. This might be due to the wood, or some change in acid concentration or cooking cycle. This is no deterrent to the scheme of using bleachability but is really an adjunct, for if the two pulps have the same bleachability but different strengths it is one further means of differentiating between them. One thing will be known about them and that is that they both have received the same degree of purification and they will respond to treatment at about the same rate. The difference being that one will develop a little greater strength on the same treatment than will the other. At the pulp mill, strength tests as well as bleachability tests are made and pulp is picked on the basis of both tests. When one mill is shipping pulp to 100 or 120 different customers and is forced to maintain a standard of uniformity in each of the customers' mills, it is absolutely necessary to have both the strength tests and the bleachability test.

Copper Number Test for Bleached Sulphite

● The foregoing refers wholly to unbleached and recently we have noticed a tendency to use a test on bleached sulphite to accomplish the same ends. This test is the copper number which instead of measuring the oxidizable materials in the pulp measures the reducing materials. While the bleachability tests measure, to a certain extent, purification, the copper number measures degradation since it reflects the amount of oxycellulose formed during the bleaching process. Information available concerning the relationship between the copper number of a pulp and its other characteristics is lacking to a large extent and is being developed currently. I do not mean to infer that the copper number is being widely used on bleached sulphites in the way that bleachability tests are used on unbleached sulphites. In the past four years, I can recall only three instances where the copper number was used at all. In one case, a mill making rag content papers wanted a bleached sulphite that would resist beating to such an extent that it could be furnished to the beater at the same time that the rag stock was furnished. In that instance we found that a lower copper number indicated a harder beating pulp and by lowering the copper number from 2 to 1.7, the desired result was obtained. In the two other instances the copper number desired from the pulp was very low because both

mills felt that it was an indication of the permanency of the pulp and that a lower copper number would indicate a pulp which would preserve its original qualities better over a period of years. I feel that information concerning the relationship between copper number and other characteristics of various pulps should be investigated but before this is done there should be a further standardization on the procedure as we have found it difficult to check the comparison from one mill to another and in order to get any place it is necessary for both mills to test all samples of pulps under consideration.

Suggested Further Work

● For further work along these lines, I would like to recommend investigation into the influence of pentosan content on pulps and how to maintain the pentosans in the pulp during the cooking. Enough information has been developed on this subject to be very interesting. For example, the addition of as little as 2 per cent of synthetic pentosans will completely change the beating characteristics of a pulp. No matter what you may have with reference to strength tests and bleachability, if the pentosan content should change, the other tests are meaningless.

We have found through experience and rule of thumb that the higher the pentosan content the more satisfactory are results obtained in the production of glassines, greaseproofs and other highly beaten papers. We have learned enough to feel that one of the major differences between the American pulps from the West Coast and the Scandinavian pulps is in their pentosan contents and that the major difference between the old fashioned mitscherlich cooked pulp and the modern indirect cooked pulp is the pentosan content. This is probably the reason these pulps in the same classes will run to higher bleachabilities than the West Coast product.

Dutcher Serving On Manpower Conservation Committee

● Ernest Dutcher, safety engineer for the Pioneer Division of The Flintkote Company, Los Angeles, was recently appointed as a special agent of the Department of Labor, serving as a $1-a-year man in cooperation with the National Committee for the Conservation of Manpower in defense industries.

Long an important factor in normal industry, safety engineering has gained added recognition by the government in the rush to complete the country's defense plans. Dutcher, who has been preventing lost man-hours at Pioneer-Flintkote for the last 21 years, will inspect various plants in Southern California to check on safety measures as well as health and sanitation. Shortly after the award of a government contract, he will call on the plant management and volunteer his services in eliminating health and safety hazards which endanger the productive capacity of defense workers.

British Columbia Pulp Prices Remain Stationary

● Price of bleached sulphite in British Columbia will remain unchanged at $72.50 per ton on the basis of Atlantic coast delivery, according to President Lawrence Killam of B. C. Pulp & Paper Company.

No change is indicated for unbleached sulphite pulp, although Mr. Killam declined to comment on that phase of the situation as his company does not produce that grade.

Officials of Powell River Company, which has become an important producer of unbleached sulphite, say that the price will remain at $63.50 a ton, delivery New York, until the end of the year.

Camas Unions Contribute to New Hospital

● A Sisters of Charity hospital is assured for Camas, Washington, according to the Mother Provincial of the Catholic order. It is not yet known when the building will be constructed, but it is thought to be during the coming year.

According to the high official of the order, there are many details to be worked out before the money can be made available for the project.

The Paper Makers Local 130 has voted a member assessment of $3 which will total some $1500 to furnish obstetrical surgery facilities at the hospital. Pulp and Sulphite Local 100 has proposed a donation of $1.50 per member. There are approximately 1600 members in this organization. Hence a sum of $2400 will be raised by this union if the proposal is carried through to a successful conclusion. This sum is to be used to finance the surgery.

Pioneer-Flintkote Installing Third Machine

● The Pioneer Division, The Flintkote Company, Los Angeles, producers of board and roofing, will have a third machine operating around the first of the year. Roofing felt will be made on No. 3.

The No. 3 paper machine is a composite of equipment on hand plus a new uniflow vat. The drive will be a steam engine formerly driving No. 1 and recently replaced by a steam turbine. The drives are off of No. 1 machine and were replaced by the latest design Black-Clawson spiral bevel gear units. The dryers are those replaced when No. 2 machine was equipped with an increased number of dryers, and the winder is from No. 1 machine. The latter is now equipped with a new Cameron winder, a Type 18, shear cut.

First Aid Classes Under Way at Camas

● The Crown Zellerbach Corporation first aid classes at Camas, Washington, officially started the week of October 6th, for the ten-week fall training program. Seventy-eight women and approximately 125 men were signed up during the first week.

According to Jack Robertson, safety supervisor, the majority of the employees of the Camas plant have taken first aid training. This year the training is offered to both employees and members of their families.

Classes meet on Monday night and Wednesday afternoon for two-hour sessions,making it possible for the enrollees to attend the training courses, regardless of their shift schedules at the plant.

The standard ten week course will last until mid-December. An advanced course will be offered, early in the year, for those completing the standard course and wishing more training.

Fred Pontin, supervisor of first aid instruction for Crown Zellerbach Corporation and Rayonier Incorporated, is in charge of the company first aid training program.

Nine employees at Camas are qualified instructors and will conduct the first aid classes there. These are Hugh A. Mason, D. D. Hutchinson, Geno Quilici, L. R. Mullineaux, Fred Weakley, L. W. Bailie, J. B. Holmes, E. W. White and J. H. Rickard.

COMPARISON OF WOOD PULP EXPORTS

Seven Months 1940 and 1941

(Tons of 2000 Pounds)

Grade:	1940	1941
Bleached Sulphite:		
Rayon and Special Chemical Grades	68,021	25,477
Other	68,028	46,945
Total	136,049	72,422
Unbleached Sulphite	38,123	44,197
Bleached Sulphate	10,292	7,073
Unbleached Sulphate	87,641	83,428
Soda	7,556	83,428
Screenings and Other Wood Pulp	1,767	1,724
Total All Grades	**281,428**	**213,604**

Source: U. S. Department of Commerce, Bureau of Foreign & Domestic Commerce.

TAPPI Holds Interesting Dinner Meeting in Tacoma

THE first of the Pacific Section of TAPPI's 1941 - 42 dinner meetings was held at the Hotel Winthrop in Tacoma, Washington, the evening of October 7th. Originally scheduled to be held in Everett, the dinner meeting was transferred to Tacoma because of a prolonged strike of restaurant workers in Everett. The meeting dates were transposed and the meeting originally planned for Tacoma on February 3, 1942, will be held in Everett instead.

The program proved highly interesting to the 108 men present in Tacoma. Carl E. Braun, chairman of the Pacific Section and vice president and mill manager of the Hawley Pulp & Paper Company, Oregon City, presided. Seated with him at the speakers' table were: Fred Shaneman, secretary-treasurer of the Pacific Section and vice president of the Pennsylvania Salt Manufacturing Co., of Washington, Tacoma; Harry S. Richmond, chief engineer of the Electric Steel Foundry Company, Portland, member of the Pacific Section executive committee; Axel Ekwall, chemical engineer, Billerud Company, Saffle, Sweden, and a fellow of the American-Scandinavian Foundation; Fred A. Olmsted, member of the executive committee and past chairman of the Pacific Section, and technical supervisor, Crown Willamette Paper Company Division of Crown Zellerbach Corporation, Camas, Washington; Niles M. Anderson, chairman of the Pacific Coast Division of the American Pulp & Paper Mill Superintendents Association and general superintendent of the St. Regis Paper Company, Kraft Pulp Division, Tacoma; Edward P. Wood, vice chairman of the Pacific Section and technical director, Longview Mill, Pulp Division Weyerhaeuser Timber Company, Longview; and, Donald Felthous, engineering department, Longview Mill, Pulp Division Weyerhaeuser Timber Company, Longview.

Mr. Braun introduced those at the speakers' table and then called upon Mr. Felthous, who presented his paper, "Recovery of Sulphur Dioxide from Sulphite Vomit Stacks," in competition for the Pacific Section's Shibley Award.

Following the paper Mr. Felthous was asked a number of questions about the design and operations of sulphur dioxide recovery systems.

The second paper was offered by Axel Ekwall, Fellow, American-Scandinavian Foundation, and chemical engineer, Billerud Com- Company, Saffle, Sweden. Mr. Ekwall, who is in the United States for a year's study of the sulphite industry, spoke on "Some Comparisons Between Sulphite Pulp Manufacture on the Pacific Coast and in Sweden."

Mr. Ekwall's paper provoked considerable discussion and he was asked many questions concerning his impressions of the industry in the United States, its methods and equipment.

Both Mr. Felthous' and Mr. Ekwall's papers appear elsewhere in this issue.

The third feature on the program was a sound moving picture entitled "Rayon—A New Frontier of Progress," produced by the American Viscose Corporation, makers of Crown Tested rayon yarns, and exhibited through their courtesy. The picture showed each step in the production of viscose and acetate filament yarn and a staple fiber and then went into the production of textiles from these yarns. Finished products pictured the versatility of rayon and its ever growing number of uses in our daily lives.

Niles Anderson, chairman of the Superintendents, was asked by Mr. Braun to announce the forthcoming semi-annual meeting of the Pacific

The November TAPPI Dinner

Will be held Tuesday evening, November 4th, at the Crown Willamette Inn, Camas, Washington.

On the program will be two papers, including one by Dr. Leo Friedman, Department of Chemistry, Oregon State College, Corvallis, on "Viscosity Tests on Pulp." Dr. Friedman will review the literature on the subject and discuss the methods employed in viscosity testing.

The title of the second paper and of the moving picture will be announced later.

SPEAKERS' TABLE at the TACOMA TAPPI DINNER ... Left to right, FRED SHANEMAN, Secretary-Treasurer, Pacific Section of TAPPI; HARRY H. RICHMOND, Member Executive Committee; AXEL EKWALL, Chemical Engineer, Billerud Co., Saffle, Sweden; CARL E. BRAUN, Charman, Pacific Section; FRED A. OLMSTED, Past Chairman and Member Executive Committee; NILES M. ANDERSON, Chairman, Pacific Coast Division, American Pulp & Paper Mill Superintendents Association; EDWARD P. WOOD, Vice Chairman, Pacific Section; and, DONALD G. FELTHOUS, Engineer, Longview Mill, Pulp Division Weyerhaeuser Timber Co.

Coast Division. Mr. Anderson reported that the dates were December 5th and 6th and the place was the New Washington Hotel in Seattle. He said that Sam A. Salmonson, assistant superintendent of the Soundview Pulp Company is general chairman and is assisted by co-chairmen, Walter Salmonson of Simond Worden White and Andrew Hawley of the Pacific Coast Supply Company, both of Seattle.

The program will be an interesting and instructive one, said Mr. Anderson, and all interested are urged to attend.

Mr. Braun announced that the next dinner meeting will be held November 4th at the Crown Willamette Inn, Camas, Washington, and that Fred A. Olmsted is in charge of arrangements.

Following is a list of those who attended the first dinner meeting of the season in Tacoma and it will be noted that most of the mills in western Washington and Oregon were represented.

O. C. Abbott, Bristol Company, Seattle; **Tore Ahlen,** Svenska Flaktfabriken, Stockholm, Sweden; **Jerry Alcorn,** Pulp Division Weyerhaeuser Timber Co., Everett; **Leslie L. Anderson,** Pulp Division Weyerhaeuser Timber Co., Longview; **Niles M. Anderson,** St. Regis Paper Co., Tacoma; **Fred Armbruster,** The Dow Chemical Co., Seattle; **A. Bailey,** University of Washington, Seattle; **Walter R. Baumann,** Pennsylvania Salt Mfg. Co. of Washington, Tacoma; **C. B. Baxter,** Tacoma Plumbing Supply Co., Tacoma; **Henry E. Becker,** Soundview Pulp Co., Everett; **George H. Beisse,** Pulp Division, Weyerhaeuser Timber Co., Longview.

H. K. Benson, University of Washington, Seattle; **W. L. Beuschlein,** University of Washington, Seattle; **Harold W. Bialkowsky,** Pulp Division, Weyerhaeuser Timber Co., Everett; **A. L. Bibbins,** Electric Steel Foundry Co., Seattle; **J. R. Blair,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Carl E. Braun,** Hawley Pulp & Paper Co., Oregon City; **A. M. Buck,** Pulp Division, Weyerhaeuser Timber Co., Everett; **A. M. Cadigan,** St. Regis Paper Co., Tacoma; **G. H. Cady,** University of Washington, Seattle; **Claude Callaghan,** The Flox Company, Tacoma.

John M. Carlson, Soundview Pulp Co., Everett; **R. E. Chase,** R. E. Chase & Co., Tacoma; **Sidney M. Collier,** Puget Sound Pulp & Timber Co., Bellingham; **N. W. Coster,** Soundview Pulp Co., Everett; **J. J. Davis,** Electric Steel Foundry Co., Seattle; **J. Bayard DesCamp,** Rayonier Incorporated, Tacoma Division, Tacoma; **P. T. Dickie,** Washington Pulp & Paper Corp., Division of Crown Zellerbach Corp., Port Angeles; **Neil Duffie,** Pennsylvania Salt Mfg. Co. of Washington, Tacoma; **George E. Durkee,** Rayonier Incorporated, Tacoma Division, Tacoma; **Axel Ekwall,** Billerud Co., Ltd., Saffle, Sweden.

E. O. Ericsson, Puget Sound Pulp & Timber Co., Bellingham; **Donald Ervin,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Donald G. Felthous,** Pulp Division, Weyerhaeuser Timber Co., Longview; **N. O. Galteland,** St. Regis Paper Co., Tacoma; **Irving R. Gard,** Merrick Scale Mfg. Co., Seattle; **B. R. Gardner,** Pennsylvania Salt Mfg. Co. of Washington, Tacoma; **A. S. Gerry,** Pulp Division, Weyerhaeuser Timber Co., Everett; Wm. R. Gibson, Northwest Filter Company, Seattle; **Robert Goettling,** Hooker Electrochemical Co., Tacoma; **Alfred Graef,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Harold G. Griep,** Pulp Division, Weyerhaeuser Timber Co., Everett.

A. Gustin, Rayonier Incorporated, Grays Harbor Division, Hoquiam; **R. N. Hammond,** Pulp Division, Weyerhaeuser Timber Co., Longview; **L. G. Harris,** Sorg Pulp Co., Port Mellon, B. C.; **R. S. Hatch,** Pulp Division, Weyerhaeuser Timber Co., Longview; **Andrew D. Hawley,** Pacific Coast Supply Co., Seattle; **J. G. Hoffman, Jr.,** Drew and Hoffman, Portland; **Don J. Holt,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Geo. A. Holt,** Rayonier Incorporated, Grays Harbor Division, Hoquiam; **A. H. Hooker, Jr.,** Hooker Electrochemical Co., Tacoma; **H. A. Hauff,** Pulp Division, Weyerhaeuser Timber Co., Longview; **J. W. Ingersol,** Hooker Electrochemical Co., Tacoma; **Lester M. Johnson,** Pulp Division, Weyerhaeuser Timber Co., Everett.

Meder Johnson, Rayonier Incorporated, Port Angeles; **B. L. Kerns,** Westinghouse Electric & Mfg. Co., Seattle; **C. R. Koch,** Westinghouse Electric & Mfg. Co., Seattle; **Robert M. Kuhn,** St. Regis Paper Co., Tacoma; **Harold Lange,** Pulp & Paper Products Laboratory, Tacoma; **R. E. LeRiche,** Brown Instrument Co., Seattle; **J. R. Lewis,** Anacortes Pulp Co., Anacortes; **Henry Loren,** Westinghouse Electric & Mfg. Co., Tacoma; **A. H. Lundberg,** Seattle.

D. K. MacBain, Pulp Division, Weyerhaeuser Timber Co., Longview; **Joseph L. McCarthy,** University of Washington, Seattle; **G. H. McGregor,** Pulp Division, Weyerhaeuser Timber Co., Longview; **Murl Miller,** Anacortes Pulp Co., Anacortes; **T. E. Moffitt,** Hooker Electrochemical Co., Tacoma; **T. H. Moran,** Pulp Division, Weyerhaeuser Timber Co., Everett; **O. P. Morgan,** Pulp Division, Weyerhaeuser Timber Co., Longview; **Fred Nicholson,** Stetson-Ross Machine Co., Seattle; **F. A. Olmsted,** Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas.

G. V. Palmrose, Weyerhaeuser Timber Co., Pulp Division, Longview; **Frederic M. Pape,** Wilson & Geo. Meyer & Co., Seattle; **William Pittam,** Pulp Division, Weyerhaeuser Timber Co., Longview; **Frank A. Purdy,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Carl A. Ramstad,** Soundview Pulp Co., Everett; **Archie P. Ratliff, Jr.,** Pulp Division, Weyerhaeuser Timber Co., Everett; **E. D. Rich,** Pulp & Paper Products Laboratory, Tacoma; **H. H. Richmond,** Electric Steel Foundry, Portland; **Oliver E. Ronken,** Soundview Pulp Co., Everett; **Don Ross,** Hooker Electrochemical Co., Tacoma; **Grant D. Ross,** St. Regis Paper Co., Tacoma.

Jim Ruck, St. Regis Paper Co., Tacoma; **Walter A. Salmonson,** Simonds Worden White Co., Seattle; **Otto H. Sangder,** Rayonier Incorporated, Grays Harbor Division, Hoquiam; **Harlan Scott,** Pacific Pulp & Paper Industry, Seattle; **Russell H. Scott,** Puget Sound Pulp & Timber Co., Bellingham; **F. C. Shaneman,** Pennsylvania Salt Mfg. Co. of Washington, Tacoma; **Wm. Sedlacek,** Brown Instrument Co., Seattle; **Brian Shera,** Pennsylvania Salt Mfg. Co. of Washington, Tacoma; **C. Sholdebrand,** Hawley Pulp & Paper Co., Oregon City.

L. E. Stevenson, Weyerhaeuser Timber Co., Pulp Division, Everett; **Allan Strang,** Anacortes Pulp Co., Anacortes; **J. B. Symonds,** The Sinclair Wire Co., Seattle; **H. V. Tartar,** University of Washington, Seattle; **V. L. Tipka,** Hawley Pulp & Paper Co., Oregon City; **Preston Varney,** Pulp Division, Weyerhaeuser Timber Co., Longview; **G. R. Vernig,** Pulp Division, Weyerhaeuser Timber Co., Longview; **R. O. Vognild,** Hooker Electrochemical Co., Tacoma; **J. B. Ward,** Hooker Electrochemical Co., Tacoma.

Harold F. Warren, R. E. Chase & Co., Tacoma; **Jack Wilcox,** Electric Steel Foundry Co., Portland; **E. W. Williamson,** O. A. Carlson Elec. Co., Seattle; **K. E. Willmer,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Edward P. Wood,** Pulp Division, Weyerhaeuser Timber Co., Longview; **L. R. Wood,** Rayonier Incorporated, Grays Harbor Division, Hoquiam; **E. H. Woodruff,** Rayonier Incorporated, Port Angeles.

Cellulose Plastics Products Production Increases in Aug.

● According to reports from ten manufacturers, representing practically the entire industry, the production in August of cellulose plastic products continues to increase, it was announced September 30th by the Bureau of the Census, Department of Commerce.

The production of nitrocellulose sheets, rods and tubes in August, 1941, amounted to 1,437,143 pounds, an increase of 9.8 per cent, compared to July, 1941, production of 1,308,941 pounds, and a 61.4 per cent increase compared to the August, 1940, production of 890,161 pounds.

The production of cellulose acetate sheets, rods and tubes in August, 1941, amounted to 572,695 pounds, and increase of 12.9 per cent as compared with July, 1941, production of 507,081 pounds.

The August, 1941, production of cellulose acetate molding composition, amounting to 2,670,007 pounds, is the largest monthly production recorded. It is 8.2 per cent larger than the 2,467,166 pounds reported for the previous month and an 87.6 per cent increase over the 1,422,938 pounds reported for August, 1940.

Now Pacific Coast Paper Mills of Washington

● The Pacific Coast Paper Mills of Bellingham, Washington, producers of tissues, made a slight alteration in its name early this month. The new name is Pacific Coast Paper Mills of Washington, Inc.

Larry Harris Visits Mills

● Larry G. Harris, chief chemist, Sorg Pulp Company, Port Mellon, B. C., visted several of the mills in Washington and Oregon early in October and attended the TAPPI dinner meeting in Tacoma on October 7th.

Mr. Harris, who has been with Sorg for 10 months, was previously with Pacific Mills, Limited, at Ocean Falls, B. C. He is a graduate in chemistry from the University of British Columbia and is a member of TAPPI.

Plans Progressing For Superintendents' Meeting

● Plans for the December meeting of the Pacific Coast Division, American Pulp & Paper Mill Superintendents Association are well under way according to Sam A. Salmonson, general chairman and assistant superintendent of the Soundview Pulp Company, Everett.

Mr. Salmonson announces the appointment of Fred R. Armbruster, Great Western Division Dow Chemical Company, Seattle, as chairman of the registration committee for the two-day meeting December 5th and 6th at the New Washington Hotel, Seattle.

One of the papers to be presented on Saturday morning, December 6th, has been announced by Merrill E. Norwood, first vice chairman of the Pacific Coast Division, in charge of the technical program. "An Investigation of the Effect of Mixed Pulp Furnishes on Sheet Properties" is the title of the paper to be offered by Robert A. Baum, assistant chief chemist, Fernstrom Paper Mills, Pomona, California.

The panel discussion on Saturday afternoon will be divided into two groups, a pulp group and a paper group, according to George H. McGregor, second vice chairman of the Superintendents and superintendent, Longview Mill, Pulp Division Weyerhauser Timber Company. Mr. McGregor will serve as chairman of the pulp panel and Merrill E. Norwood will act as chairman of the paper panel. Two superintendents and two technical men will serve on each panel and lead the discussions.

Registration will begin Friday noon, December 5th, and in the evening an informal party will be held at the New Washington.

A stag breakfast will start off the Saturday program to be followed by the papers and discussion of them. A luncheon will be held at noon and then will come the Superintendents' Round Table Discussion, divided into pulp and paper groups as stated. The meeting will close with a dinner dance on Saturday evening.

Assisting Mr. Salmonson as co-chairmen are Andrew D. Hawley, Pacific Coast Supply Company, Seattle, and Walter A. Salmonson, Simonds Worden White Company, Seattle.

SNAPSHOTS from SOUTHERN CALIFORNIA ... JOE SCHEUERMAN, Sales Engineer, Cameron Machine Co.; W. H. "BILL" WILLIAMSON, Shuler & Benninghofen, Hamilton, Ohio, and Mr. VOGT, Purchasing Department, Fernstrom Paper Mills, Pomona, California, talking with CHARLES G. FRAMPTON, Superintendent of Fernstrom at Pomona (back to camera).

In the top picture at the right, Joe Scheuerman tells ALAN C. DUNHAM, Pacific Coast representative of Lockport Felt Co. and Wm. Cabble Excelsior Wire Mfg. Co., Newfane and Brooklyn, N. Y., respectively, how to take pictures with his new Leica.

Lower left, a cheerful snap of Joe Scheuerman and Charley Frampton, who is Third Vice Chairman of the Pacific Coast Division of the American Pulp & Paper Mill Superintendents Assn. ... Center, J. W. GENUIT, Vice President and Sales Manager, Fernstrom Paper Mills, Pomona ... Right, Bill Williamson tells Mr. Vogt about Shuler & Benninghofen felts.

Frank Frampton Visiting on Coast

● Frank D. Frampton arrived in Los Angeles October 1st for a visit with his brother, Charles Frampton, superintendent of the Fernstrom Paper Mills of Pomona, California.

For many years Frank Frampton was general manager of the Hopper Paper Company of Taylorville, Illinois, and more recently was vice president and manager of the North American Pulp & Paper Corporation, Cheboygan, Michigan.

California-Oregon Mills Supply 17 Men to Army and Navy

● The California-Oregon Paper Mills of Los Angeles, lost its seventeenth man to the defense forces when Robert Clarke of the sales department was called to active duty with the Navy on October 13th.

Mr. Clarke, a member of the Naval Reserve, will be stationed in San Diego.

Topnotcher Glen Phillips

● The "Topnotcher," sales house organ of the Pioneer Division, The Flintkote Company, Los Angeles, has this to say about Glen A. Phillips, superintendent.

"Glen Phillips looks like a thirty-year-old college professor or foreign diplomat. Yet he has two grandchildren, no college or even high school education, and is the two-fisted superintendent of all felt and paper mill operations of P-F. Sprightly, clean cut, American looking, Phillips flew his own airplane for 18 years, now gets his fresh air as an avocational avocado rancher at Del Mar."

Much Pulp Being Shipped From Anacortes

● The Anacortes Pulp Company, Anacortes, Washington, subsidiary of the Scott Paper Company of Chester, Pennsylvania, is shipping an average of 65 carloads of unbleached sulphite pulp to the parent company, producer of tissues and toweling, according to a survey of production in Anacortes recently made by the Anacortes American.

Defense Work Taking Large Quantities of Paper and Board

● A few of the many uses to which paper and board are being put in the defense program were listed recently by Washington columnist John Kelly writing for the Tacoma Sunday Ledger and other Pacific Northwest papers. Quoting Mr. Kelly:

"The market was upset when an official of the OPM declared that the government would be taking 35 per cent of the 1942 output (paper and paperboard) and up to 50 per cent in 1943. Mills, in turn, are struggling to acquire new machinery and in this instance they run up against the priorities. The shortage of kraft paper comes, in part, from the expansion of the steel industry. Sheets of kraft paper are laid between sheets of stainless steel, tin plate, and about 45,000 tons of kraft paper have been used for this purpose. Demand for the tin and stainless steel is reflected in the kraft mills . . .

"Housewives are to be requested to save their waste paper which will be processed into paperboard boxes. The army will require 1,500 tons of these boxes in which six dozen shirts will be placed in every 11 pound container. For the canned tomatoes for the army another 1,000 tons will be needed, and for ammunition boxes will require 30,000 tons a month.

"Paper and pulp mills in the Puget Sound area will have all the business they can handle. Principal reason is that the federal government is going to town in a big way as a purchaser of paper of all kinds. So great is the demand that paper drives are now being planned on the order of the recent aluminum drive, with the exception that the contributors of paper can, if they are smart collect a few cents per 100 pounds for their waste paper, magazines, cartons, etc.

"Government estimates are that 20 per cent of the national production will be taken by federal agencies (1941). This is about 4,000,000 tons. The government is using paper for mimeographing, pamphlets, application blanks, press releases, priority orders, contracts and, of course, copies of speeches which are also released to the press with the hope that some extracts will be printed."

OPM Economizing In Paper Usage

● It was reported from Washington early in October that the impact of the defense program has finally come home to roost. Reporters covering the Office of Production Management and other defense agencies were given mimeographed releases printed on both sides of the paper, and single spaced in many instances.

Press information officials explained that the Office of Emergency Management was having "delivery date" trouble. The information division has been using about 44,000,000 sheets of paper monthly for releases, and now expects that use of both sides and other conservation measures will cut that figure in half.

Government departments outside the defense category apparently have made no effort as yet to curtail paper usage, continuing to mail out tons of publicity matter double spaced and on one side only.

St. Helens Operating Metal Salvage System

● St. Helens Pulp and Paper Company, St. Helens, Oregon, is making concerted effort toward conservation of metals at the plant, according to Max Oberdorfer, Sr., president and general manager. Several months ago, he says, the company stopped selling scrap metals. Instead these scraps are collected in neat piles, from which any and all usable metals are extracted to be converted into parts for use at the plant.

Master Mechanic Robert A. O'Dell is in charge of this salvage system.

The salvage metals include steel, cast iron, brass, bronze, stainless steel and copper.

Longview Fibre Bowling League Rolling Along

● The new bowling league of Longview Fibre Company employees at Longview, Washington, is said to be well under way with the inter-team competition. On September 30th the construction team lead the league of nine teams, with a score of 1000 per cent. Claude Miller, of the mechanics team, held the individual high-score average of 193; and Bob Wilcos, of the office team, held high game of 233 points.

According to Tom Mendenhall, secretary of the league, the company first organized a tournament last year, with five teams.

The women at the Longview Fibre Company plant have a bowling team entered in the city league for women.

Rayonier Building New Tacoma Smoke Stack

● The Tacoma Division of Rayonier Incorporated is building a new 225-foot concrete stack for its power plant. The work is being done by the Rust Engineering Company of Pittsburgh, specialists in the building of smoke stacks.

A Better Than A-10 Priority for Pulp & Paper?

● It is rumored that the pulp and paper industry may shortly receive better than an A-10 priority rating on repairs and maintenance due to the necessity for maintaining production at its present rate in excess of 100 per cent.

Monthly an increasing proportion of the industry's output goes for defense purposes and hence its importance in the defense picture becomes greater.

The rumor comes from several authoritative sources which justify its publication. However, the rapidity with which the priorities situation changes may make this news either a scoop or a dead letter before it is off the press.

Weyerhaeuser at Longview Adjusts Maintenance

● Longview Mill, Pulp Division Weyerhaeuser Timber Company, Longview, Washington, has instituted a program of plant maintenance compatible with the shortage of materials so prevelent in the industry at the present time. In organizing this program the management sat in conference with the maintenance personnel in mid-September. A long list of scarce materials was discussed in detail.

Certain materials and parts cannot be obtained, according to W. N. Kelly, manager of the Longview mill, and ways of substituting and patching have to be found.

The basis of maintenance has been changed or modified to accommodate the material shortages. Where it was most economical, at one time, to sacrifice some materials at a saving of labor, it is now reversed. Materials of all sorts are saved, regardless of the additional labor involved.

It is the management's aim to interest all employees in the "materials saving" program as a means of insuring continued full operation of the mill.

Pulp Mill Stocks Steadily Declining

● With paper production running beyond rated capacity (the American Paper & Pulp Association reported operations at a new high of 105.2 per cent of capacity for the week ending September 27th), stocks of wood pulp at producing pulp mills continue to decline.

Data released by the United States Pulp Producers Association indicate that stocks of wood pulp on hand at producing mills reporting to the association amounted to 106,878 tons of all grades as of July 31st. At the end of February this year the stocks were 159,623 tons. The decline through July was 52,745 tons or 33 per cent in five months.

Stocks of pulp on hand at domestic pulp producing mills as of July 31st consisted of 26,333 tons of bleached sulphite as compared with 43,300 tons at the end of February; 16,037 tons of unbleached sulphite against 24,585 tons five months before; 17,997 tons of sulphate pulp against 48,878 tons, and 46,511 tons of groundwood against 42,860 tons at the end of February. Groundwood showed the only increase.

Canadian mill stocks are likewise down according to reports to the Canadian Pulp and Paper Association. At the end of July there was a total of 60,453 short tons on hand of all grades as compared with 86,085 short tons on hand at the end of February.

The stock on hand at producing Canadian mills the end of July were divided as follows: 11,758 tons of bleached sulphite against 26,995 tons at the end of February; 6,586 short tons of strong unbleached against 11,048 tons; 21,230 tons of news grade sulphite against 17,335 tons; 2,477 tons of sulphate pulp against 3,266 tons and 18,402 tons of groundwood against 27,441 tons.

Board mills are approaching their theoretical capacity with production at 98 per cent for the week ending September 27th, and 99 per cent the week before. Average for September was 72 per cent.

Trade Talk

of Those Who Sell Paper in the Western States

Lyle Wright Heads Montana Paper Company

● Lyle Wright, for several years a salesman with the Ward-Thompson Paper Company of Missoula, Montana, has become a member of the firm and the name has been changed to the Wright-Thompson Paper Company, Inc., with Missoula remaining as headquarters.

The Wright-Thompson Paper Company, Inc., carries a full stock of printing papers, wrapping papers, bags and other staples.

Commenting upon the change the Kalispell, Montana Times said, "Lyle is a World War veteran who signed up with the old firm several years ago. He has a pleasing personality and understands the paper game to such an extent that he has more than doubled the previous patronage his firm enjoyed in the Flathead and other sections tributary to Missoula. With Lyle at the head of the firm we shouldn't be surprised if he corralled all the rest of the trade in this territory."

California Shoppers Asked To Conserve Wrapping and Bags

● A drive was recently initiated in California to obtain the cooperation of consumers in reducing the consumption of wrapping paper and paper bags.

William D. Hadeler, president of the Retail Grocer's Association, made the following announcement on October 3rd:

"In the interests of national defense it becomes necessary to immediately curtail all waste and to reduce some of the ordinary uses of paper. Consumers are urged to cooperate with merchants by reducing as fast as possible the demand for paper wrappings, paper bags and paper in any form not necessary to the processes of distribution."

Similar statements were issued by the California Retailers Association and the Chain Store Association.

Zellerbach Headquarters Being Modernized

● The Zellerbach Paper Company headquarters is having its face lifted.

The main floor has had a new acoustical ceiling put in and new lighting fixtures. The top floor is undergoing a general modernization.

Some of the old timers around Battery and Sansome streets objected to the improvements, as they felt that the building was one of the last business landmarks in that part of the city.

The work is being done under the direction of Walker Shephard, newly appointed manager of the headquarters administration department of the company.

McCusker Visits Coast Distributors

● E. L. McCusker, one of the executives of the Reyburn Manufacturing Co., Philadelphia, paid a visit to the trade on the Coast last month.

Charles Burgess Receives Zellerbach 45-Year Pin

● Almost half a century of faithful service was rewarded when Charles E. Burgess of the Service Department, Zellerbach Paper Company, San Francisco, was presented with a 45-year pin by Harold L. Zellerbach, president of the company.

Mr. Burgess is one of the original employes hired by Anthony Zellerbach, founder of the company. He was born at Second and Howard Street, San Francisco, in 1879, and went to the Lincoln Grammar School, which was attended by a number of San Franciscans who later attained fame and fortune all over the world.

His first job was that of printer's devil, and when he came to work for Anthony Zellerbach in 1896, he was known as "Little Charlie, the Errand Boy," for he grew five inches after he was 21 years old.

He has worked as salesman for the company, but in more recent years has been in the service department of the San Francisco Division. When he was a bit younger he played baseball, and he is strong for fishing and hunting, but now confines his activities mostly to gardening. He is married and lives in the Richmond.

CHARLES E. BURGESS, 45 Years with Zellerbach Paper Co.

Arthur Towne Back From Association Meeting

● A. W. Towne, Northern California manager of Blake, Moffitt & Towne, San Francisco, is back after an extended Eastern trip. Mr. Towne attended the National Paper Trade Convention in Chicago, and coming home via the Northwest he addressed luncheon and dinner meetings of the paper trade in Seattle, Tacoma, Portland and Spokane, telling them of the work accomplished at the convention, and of the information he received there.

Lynn Oviatt, manger of the Blake, Moffitt & Towne San Diego Division also attended the convention.

Bonestell on Eastern Trip

● H. S. Bonestell, Jr., president of Bonestell & Co., San Francisco, is in the East on a four week's trip that will take him through many of the paper mills in that territory.

Hecht Back from Swing Around Country

● Victor E. Hecht, vice-president of the Zellerbach Paper Company, San Francisco, is back at his desk after a two month's trip East. Mr. Hecht visited all the important paper vendors in that area, attended the annual Hammermill Paper Co. meeting, and also the convention of the National Paper Trade Association in Chicago.

Informant Adds New Feature

● Beginning with the November issue THE INFORMANT, chatty little house organ of the Zellerbach Paper Company, will carry a feature called "The Paper Picture." The new feature will give information gleaned from the Eastern paper markets.

Standard Carton Company Suffers Serious Fire

● The Standard Carton Company of Tacoma, Washington, was severly damaged by a fire of undetermined origin on September 23rd. Damage was estimated by Joseph O'Reilly, president at about $35,000.

Partial production was resumed a few days later in the company's warehouse, a separate building, but Mr. O'Reilly estimated it would take several months to rebuild and re-equip the damaged plant which uses large quantities of Pacific Coast made boxboard in the manufacture of cartons.

Paper's Part in Defense Described on Radio

● J. E. Hanny, resident manager, Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, Camas, Washington, recently described the manufacture of paper over a national radio hook-up. He and Clyde Johnson, papermaker and Mrs. Florence Ball, bag machine operator, and Maitland Jordan, announcer of KOMO, Seattle, stood before a microphone in the bag factory. The announcer described the operation of a paper machine and then interviewed Johnson, asking him questions regarding the operations. Mrs. Ball, who runs the machine making powder bags, was next interviewed, concluding the Camas division of the program.

This was a part of a 30-minute "Defense of America" program sponsored by the National Association of Manufacturers which included the Pacific northwest's lumber, pulp and paper industries.

After opening with an introduction from the main studio in Seattle, it was cut over to Snoqualmie Falls where Graham McNamee described the falling of a huge fir tree and interviewed a logging superintendent. The next switch was to Camas, then back to Snoqualmie Falls.

Returning to the studio a wire rope man and procurement officer were interviewed. The next part of the program came from a plywood factory in Hoquiam, where the process of manufacturing plywood was related. The final switchover was back to Snoqualmie Falls where McNamee broadcast from a sawmill.

Puget Sound Girls Doing Defense Work

● Lending their bit to the defense effort, three young women from the executive offices of the Puget Sound Pulp & Timber Company have joined the Filter Service of Civilian Defense, an organization maintained as spotters for aircraft. The girls will spend part of their day at switchboards in the Herald Building and will relay information to Northwest Headquarters in Seattle.

The three volunteering are: Miss Cora Knuppenburg, Miss Wilma Johnson and Miss Katherine Richardson. Miss Richardson has the distinction of enlisting just one hour after she became an American citizen. She was formerly a Canadian.

British Sailors Visit Hawley Mill

● Herbert Went and Ernie Nichols, young British sailors, 21 and 18 years old, respectively, visited the Hawley Pulp and Paper Company plant at Oregon City, Oregon, September 23rd. They were on leave from the H.M.S. Warspite, in dock at Bremerton, Washington, where the ship is being repaired, following damage at Crete.

Although this is the first leave these fellows have had in two and one-half years, their morale is high. When asked their opinion of the United States, they said it was "swell."

Roofing Shipments Make Big Gain In First Seven Months

● Shipments of prepared asphalt roofing in July totaled 4,061,931 squares, showing an increase over 3,569,552 squares in the preceding month and a larger gain over 2,941,040 squares in the similar month last year, according to the monthly summary issued September 30th by the Census Bureau. The July shipments brought the aggregate for the first seven months of this year up to 22,395,403 squares, contrasted with 15,898,586 squares in the corresponding period of 1940, and 17,791,988 squares in the first seven months of 1939.

The July last shipments consisted of 1,334,207 squares of ready roofing, including smooth, sanded, talc, mica or other fine mineral surfacings; 1,178,483 squares of grit surfaced roofing, 1,350,784 squares of strip shingles, and 198,457 squares of individual shingles.

In addition, 207,761 squares of asphalt siding were shipped in July, against 131,342 squares in the same month last year, making a total of 1,071,354 squares in the first seven months of this year, compared with 847,044 squares last year.

Victor Hughes Named Community Chest Leader

● Mr. Victor Hughes, office manager of the Pacific Coast Paper Mills, has been appointed as leader of the Industrial Division in the Bellingham Community Chest drive. Mr. Hughes headed the Salvation Army drive last year and gave a good account of himself at that time.

Social Uses of Advertising

From the Wall Street Journal

ASSISTANT ATTORNEY GENERAL ARNOLD'S published views as to advertsing, whether he intended it or not, have given to many people the impression that he regards it in general as more or less an economic "waste." That idea is not a new one. Probably most of those who believe in a thoroughgoing collectivism take, or would, if challenged, take the same position. It is one which superficially seems justifiable, but it has fundamenal implications of other and farreaching importance.

What is **waste?**

Waste is simply the employment of labor upon material to produce something that is **not useful,** or else the unnecessary destruction of something **useful.**

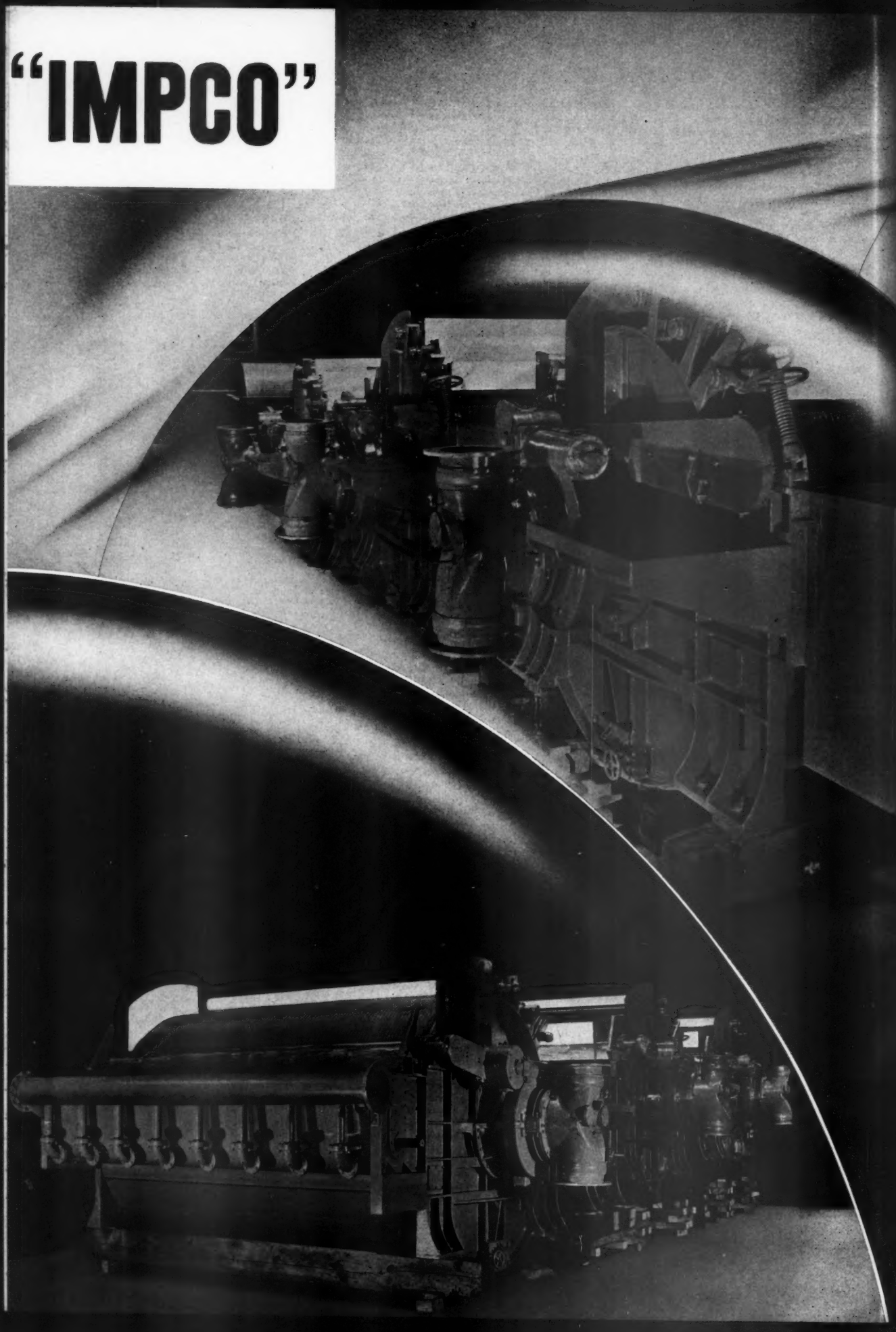
Is advertising **useful?**

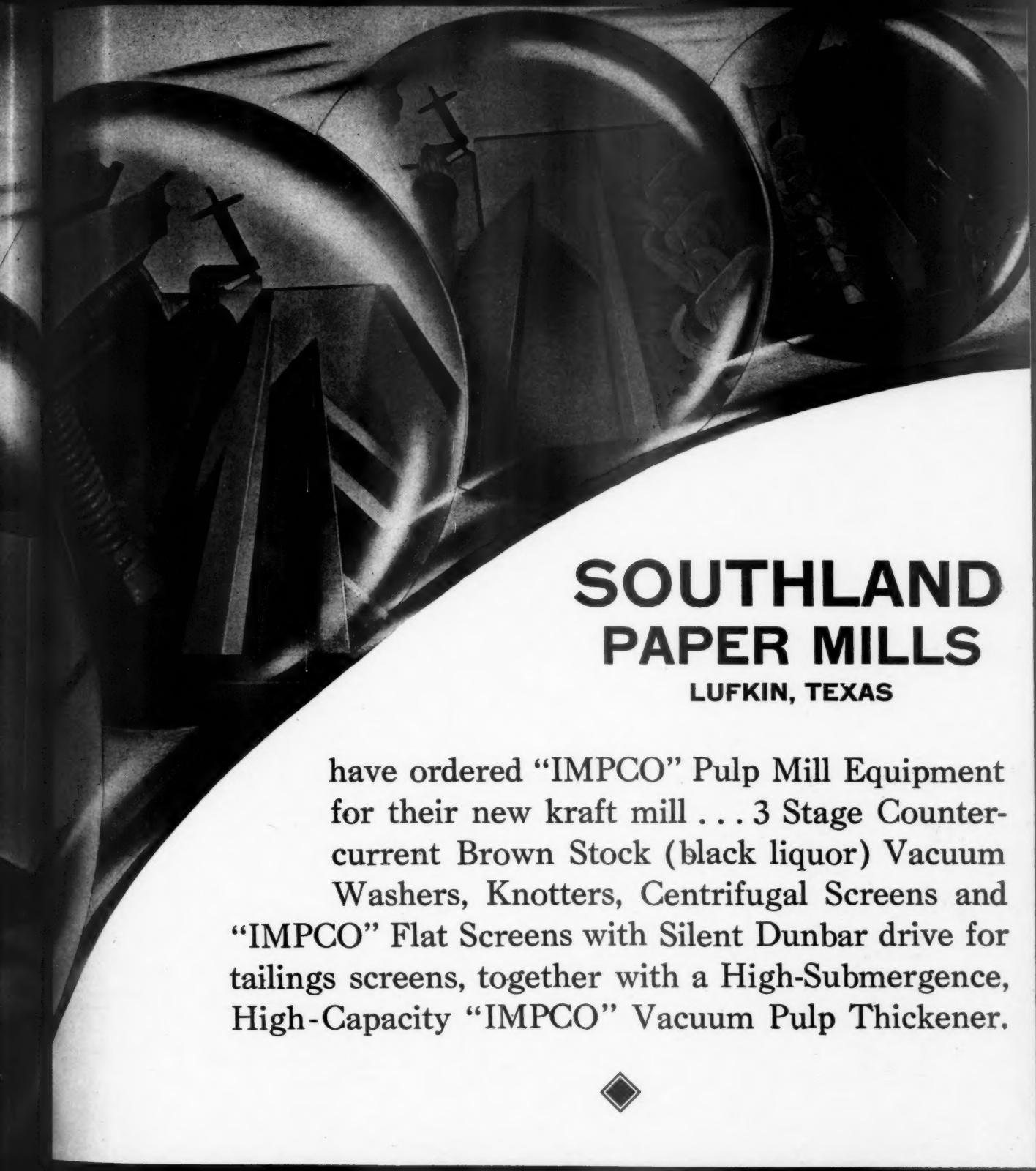
Advertising is an expression of two things—competition and variety of product or service. We certainly believe that competition is useful, for we have built our whole economic structure upon its preservation. We want no monopoly, either private or state. Mr. Arnold's division of the Department of Justice is busy every day in the effort to strangle private monopoly at its origin. There are no doubt those in high places who would like to enclose our whole economy in a rigid governmental "planned economy," but the whole tradition and instinct of our people is still opposed to any such thing. It is probably safe to assume that Mr. Arnold is equally opposed to it. Regarded, therefore, as a means of competition, advertising is clearly useful. After all, it is but a substitute for the door-to-door salesman, and, so far, he has not been seriously classed as "waste."

But there is a deeper implication than that related merely to competition—that of **variety.** Most people would admit that standardization of anything means destruction of dynamism, and dynamism is the first condition that makes progress possible. The only thing that makes totalitarianism possible is standardization of ideas. In the arts and in literature, in fact in all that constitutes culture in a people, standardization is practically equivalent to death. The late Werner Sombart in his book of several years ago, "German National Socialism," pointed out that this tendency toward standardization was one of the great evils of the present time. Standardization of the economic process is but the first step toward standardization of everything else, and the end of that road is the end of the whole system which we like to call our American way of life.

Everything can be overdone, carried to excess. So can advertising. But advertising **as such** can be deemed "wasteful" only by those who believe in the standardization of the national economy, and, whether they know it or not, standardization of our national economy must lead to the standardization of everything else. If men lived by bread alone that would perhaps be all right. It is all right for the beehive and the ant-head. They are what they were thousands of years ago. But, so far, man has refused to live that way—and always will.

"IMPCO"





SOUTHLAND
PAPER MILLS
LUFKIN, TEXAS

have ordered "IMPCO" Pulp Mill Equipment for their new kraft mill . . . 3 Stage Counter-current Brown Stock (black liquor) Vacuum Washers, Knotters, Centrifugal Screens and "IMPCO" Flat Screens with Silent Dunbar drive for tailings screens, together with a High-Submergence, High-Capacity "IMPCO" Vacuum Pulp Thickener.

IMPROVED PAPER MACHINERY CORP. · NASHUA, N. H.

MAKERS OF THE FOLLOWING MACHINES FOR THE PAPER INDUSTRY

ROTARY AND FLAT SCREEN KNOTTERS · CENTRIFUGAL SCREENS · FLAT SCREENS WITH DUNBAR DRIVE (METAL OR CYPRESS VATS) · VACUUM FILTERS, INCLUDING SAVE-ALLS, WASHERS, HIGH DENSITY THICKENERS, LIME SLUDGE FILTERS, BLACK LIQUOR WASHERS, FORMING CYLINDERS · MULTIPLE STAGE COUNTER-CURRENT PAPER STOCK WASHERS, DECKERS, WET MACHINES, INCLUDING HYDRAULIC WITH HIGH DENSITY VACUUM WET END THORNE BLEACHING EQUIPMENT · PNEUMATIC WATER FILTERS · THE IMPCO LINE OF "IMPROVED" EQUIPMENT IS ASSISTING IN THE ECONOMICAL PRODUCTION OF QUALITY PULP AND PAPERS

The Mill Man's Utopia

Happy go lucky,
Care-free and smiles;
Paper mill salesmen
Have discarded their wiles.
We don't want more orders,
The mill's full—You bet!
The orders we have
You jobbers may get.
Delivery next week,
Next month, never fear,
Your quota is coming
Maybe next year.

The Jobber's Promise

Bashful and wistful
With thought and with care,
Your old friend the jobber
We sit in our chair.
We cautiously offer
Our orders for wares,
And await the answer
With expectant air.
Deep in our hearts
We remember "back when."
Don't worry, mill salesmen
You're our meat in the end!

—Hays Rehm, Western Paper Converting Co., Los Angeles

G. Tom Lyons, R. E. LeGrant, Halsey Lamme, E. LaVigne, George McNamara, Marshal Moss, J. E. Maurer, Ben Manker, J. D. Maloney, Paul R. May, A. J. Nelson, Frank Phillbrook, J. M. Peterson, Don Plumb, Stanley Potter, Merle Paup, Paul Raab, Lester Remmers, Marcus Ray, I. A. Reiss, Charlie Spies, Carl Smith, Pete Spenzer, Floyd D. Smith, W. E. Taverner, Jerry Thiem, Dwight Tudor, B. Thacker, A. M. Thompson, Carl Thomas, Earl Underwood, F. C. Van Amberg, Marvin Vanderheiden, George Wieman, Warren Webb, S. J. Warner, W. H. Weitzman, L. S. Young, S. G. Yount, K. Yokouchi, Donald Zucker and R. M. Ziegler.

You recognize lots of names you know.

Among the mill men who put on the swell party are a lot of fellows whom you know. This 7th Annual shindig was held during the term of Les Remmers.

I want to give you the names of the fellows who did the work as heads of committees. But I want you to understand, first, that they are not the only ones whose efforts resulted in this big party. Take the fellows who are appointed to serve on the committees, for instance. They "give out" with all they have, and that goes particularly for this crowd. Teamwork, they call it.

The Board of Directors for the "lucky seventh" are:

President—Lester E. Remmers.
Vice-President—Paul Raab.
Secretary—J. Dwight Tudor.
Treasurer—Ansel A. Ernst.
Past President Ex-officio— Ed N. Smith, '36.
Past President Ex-officio—Neil B. Sinclair, '37.
Past President Ex-officio—George C. Wieman '38.
Past President Ex-officio—Al S. Hentschel '39.
Past President Ex-officio — Charles Spies, '40.

Then, I'd like to list out the Committee in Charge of the '41 Hi-Jinks:

General Chairman ..... Jerry Thiem
Vice chairman ..... George McNamara
Christmas Fund Tickets .. Horace Gibson, chairman
J. E. Whiting
Harry Fields
P. E. Loer
Larry Young
Finances ..... Art Fox
Program ..... Hays Rehm
Entertainment ..... Ed N. Smith
Reservations ..... Neil B. Sinclair
Golf ..... Frank Philbrook
Sports and Soft Ball ..... Verner Moore
Door Prizes ..... Russell Attridge
Director of Activities ..... Jerry Madigan

Sponsors

You'll recognize a lot of the houses, named here. These are members of the Paper Mill Men's Club and the manufacturers they represent, and they made the "lucky seventh" possible:

Adhesive Products, Inc., Lloyd I. Ramsay; **American Lace Paper Co.,** Lon A. Kippes; **American Tissue Mills,** Howard E. Fay;**Angelus Paper & Excelsior Products Co.,** F. C. Van Amberg; **Atlantic Gummed Paper Corp.,** Robert G. Marquis; **Bloomer Bros. Company,** Johnson, Carvell & Murphy; **Boothby Fibre Can Co.,** Johnson, Carvell & Murphy; **Boston Drinking Cup Co.,** H. O. Bishop; **Brown Paper Goods Co. of California,** Charles E. Digby; **California Cotton Mills Co.,** Ben Bahnsen; **California-Oregon Paper Mills** Taylor Alexander, George H. McCord, J. M. McCord; **Capital Envelope Co., Ltd.,** George McNamara, Horace E. Gibson.

Comfort Paper Corporation, L. C. Harden, Merle M. Paup, Ellis U. Ammann; **Consolidated Paper Mfg. Co.,** Larry Young; **Continental Bag Specialties Corporation,** I. A. Reiss; **Crown Willamette Paper Co.,** Lester E. Remmers, Newbey A. Green, Chester O. Gunther, Wm. R. McHaffie, H. A. Swafford; **Cupples Company,** Charles Spies, Emile J. LaVigne; **Dixie Vortex Company,** Verner Moore, Melvin Mower, Geo. Skleba; **Dobeckmun Company,** Chas. E. Jones, T. E. Bruffy; **Everett Pulp & Paper Co.,** A. A. Ernst; **Fernstrom Paper Mills, Inc.,** F. O. Fernstrom, J. W. Genuit, E. G. Swanberg, W. H. Chenoweth, Marshall Moss; **Fibreboard Products, Inc.,** B. P. Altick, J. Dwight Tudor, J. A. McDaniel.

Food Packaging, West Coast Coverage Co.; **Gilbert Paper Company,** Roland W. Colwell; **Samuel F. Goldman,** Mill Representative; **Gordon Murphy and Norman Buist Co.,** Norman A. Buist; **Graham Paper Company,** Frank R. Philbrook, Willard F. J. Taylor; **Great Western Cordage, Inc.,** A. B. Wimpey; **Hardwood Products Co.,** West Coast Coverage Co.; **Harvey Paper Products Co.,** H. O. Bishop; **Hawley Pulp & Paper Co.,** W. B. O'Malley; **Herz Manufacturing Corp.,** West Coast Coverage Co.; **Inland Empire Paper Co.,** S. R. Whiting, J. E. Whiting; **International Paper Co.,** (Southern Kraft Division), Frank N. Gladden; **Johnson Carvell & Murphy,** Russell F. Attridge, Garry Carlton, Al C. Hentschel, Jerry Madigan, Phil E. Ossian.

Kimberly-Clark Corporation, C. Francis Jenkins; **Lily Tulip Cup Corporation,** (Crystal Division), Paul R. Raab, Louis Levine, Andrew M. Dean, Earle E. Wright; **Longview Fibre Company,** A. D. West, B. J. Thacker; **Los Angeles Paper Bag Co.,** G. S. Brenzel, C. J. Little; **Marinette Paper Company,** Perry E. Loer; **Menasha Products Company,** Lawrence R. Zick; **Milwaukee Lace Paper Co.,** G. A. Thiem; **Morgan Paper Company,** (A. U. Morse & Co. Division) Elmer C. Thomas; **Morrison-Atlas Products, Inc.,** National Products Distributors; **Nashua Gummed & Coated Paper Co.,** Neil B. Sinclair; **National Paper Products Sales Co.,** Harry L. Fields; **Nekoosa-Edwards Paper Co.,** Marvin Vanderheiden; **Northern Paper Mills,** Irvin E. Damon, Joseph D. Maloney.

Oregon Pulp & Paper Co., Lewis H. White; **Pacific Coast Paper Mills,** S. G. Wilson, Louis F. Wanka; **Pacific Waxed Paper Co.,** Chas. L. Brouse, Hal D. Cassaday, Anthony P. Sheehan; **Paper Container Mfg. Co.,** J. M. Sholl Lewis; **Paper Manufacturers Co., Inc.,** Carl W. Draper; **Paper Products & Supply Co.,** Russell Hosfeldt; **Paper Supply Company,** C. Cleve Bolyard; **Paterson Pacific Parchment Company,** Floyd D. Smith; **Pioneer Division The Flintkote Co.,** A. E. Carlson, Lorin Miller, Cliff Johnson, Mart Larsen; **Pomona Paper Products, Inc.,** Paul R. May, M. J. Boradori; **Rhinelander Paper Company,** Edward N. Smith; **Sales Service Corporation, Ltd.,** S. R. Clarke, Frank Skrivanic; **Schermerhorn Bros. Co.,** A. Bruce Swope, Earl J. Fillier, Leo L. Corder.

Sheffield Manufacturing Corporation, National Products Distributors; **Silklin Paper Corporation,** W. H. Charbonneau, L. W. Hagerstrom; **Southland Paper Converting Co.,** Stanley G. Yount; Paul R. Halstead; **St. Helens Pulp & Paper Co.,** Frank R. Philbrook; **The Diamond Match Co.,** G. T. Lyons; **The Gummed Product Co.,** E. A. Dillon; **The Tuttle Press Company,** Edward N. Smith; **Tubbs Cordage Company,** Joseph H. Barry; **United States Envelope Co.,** Louis T. Mork, W. A. McBride, J. S. Fairchild; **Universal Paper Products Company,** Jack R. Chancellor; **Western Paper Converting Company,** Hays Rehm; **Western Tablet & Stationery Co.,** R. E. Fay; **Western Waxed Paper Co.,** George C. Wieman, Walter A. Voltz, Arthur E. Kern, Arthur L. Fox, Robert E. Fletcher.

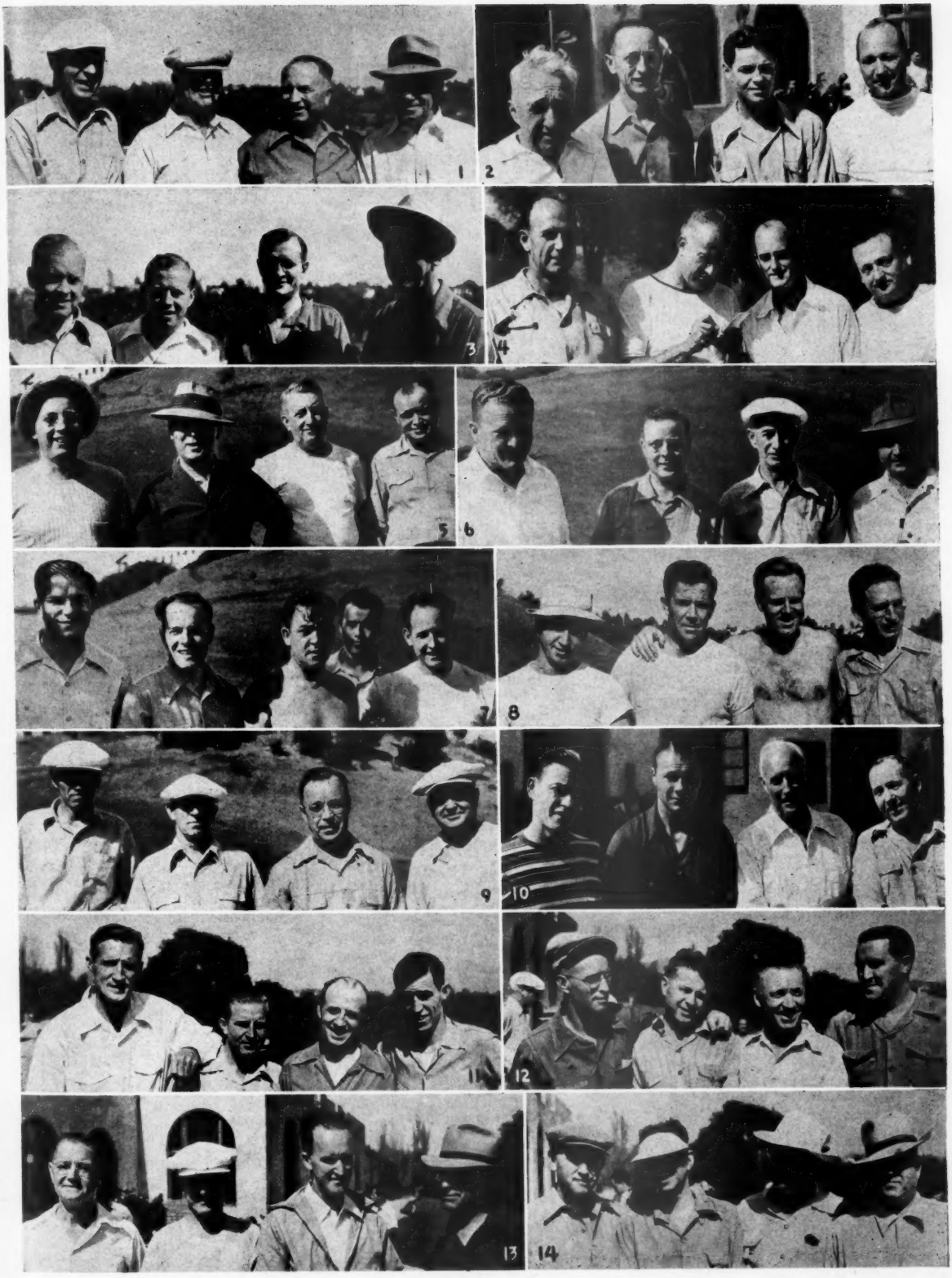
Guests

Just a couple more, Joe, and then I'll wind up. But you'll want to see who was the list of invited guests. Here they are:

Acme Paper Company, Glendale, California; **Alpha Beta Food Markets, Inc.,** Vernon, California; **American Paper**

AT THE SEVENTH ANNUAL HI-JINKS of the PAPER MILL MEN'S CLUB OF SOUTHERN CALIFORNIA . . . No. 1, left to right, FLOYD D. SMITH, FRANK PHILBROOK, GUY LeGRANT and Carl FRICKE. No. 2, TOM LYONS, F. C. VAN AMBERG, JOE MALONEY and IRV DAMON. No. 3, RALPH ERLANDSON, SAM WARNER, JOSEPH FAIRCHILD, and ANSEL ERNST. No. 4, P. K. HOLLAND, FRAN JENKINS, BILL TAVERNER, and GEORGE WEIMAN.

No. 5, PAUL RAAB, ART J. NELSON, LESTER REMMERS, ROLLA De HATER. No. 6, GARRY CANN, NEWBY GREEN, HARRY FIELDS, J. W. GENUIT. No. 7, BOB FLETCHER, ART FOX, JERRY THIEM, BILL BRUNAUGH,



MERLE PAUP. No. 8, BILL WEITZMAN, BILL CHARBONNEAU, LEONARD HAGSTROM, JOHN COHEN. No. 9, MARCUS RAY, BEN MANKER, PETE PETERSON, HALSEY LAMME.

No. 10, R. E. FAY, H. E. FAY, CHARLES PRITCHARD A. F. DUVAL. No. 11, EARL A. UNDERWOOD, STANLEY POTTER, LEE LAMBOY, MERLE GRAYBILL. No. 12, A. M. THOMPSON, CARL SMITH, CARL THOMAS, DOUG FISHER. No. 13, AL HENTSCHEL, CHARLES HEAD, JACK ARNOLD, ARTHUR FELT. No. 14, MILT CORCORAN, ART KERN, TED CORCORAN, CHARLES HULSE.

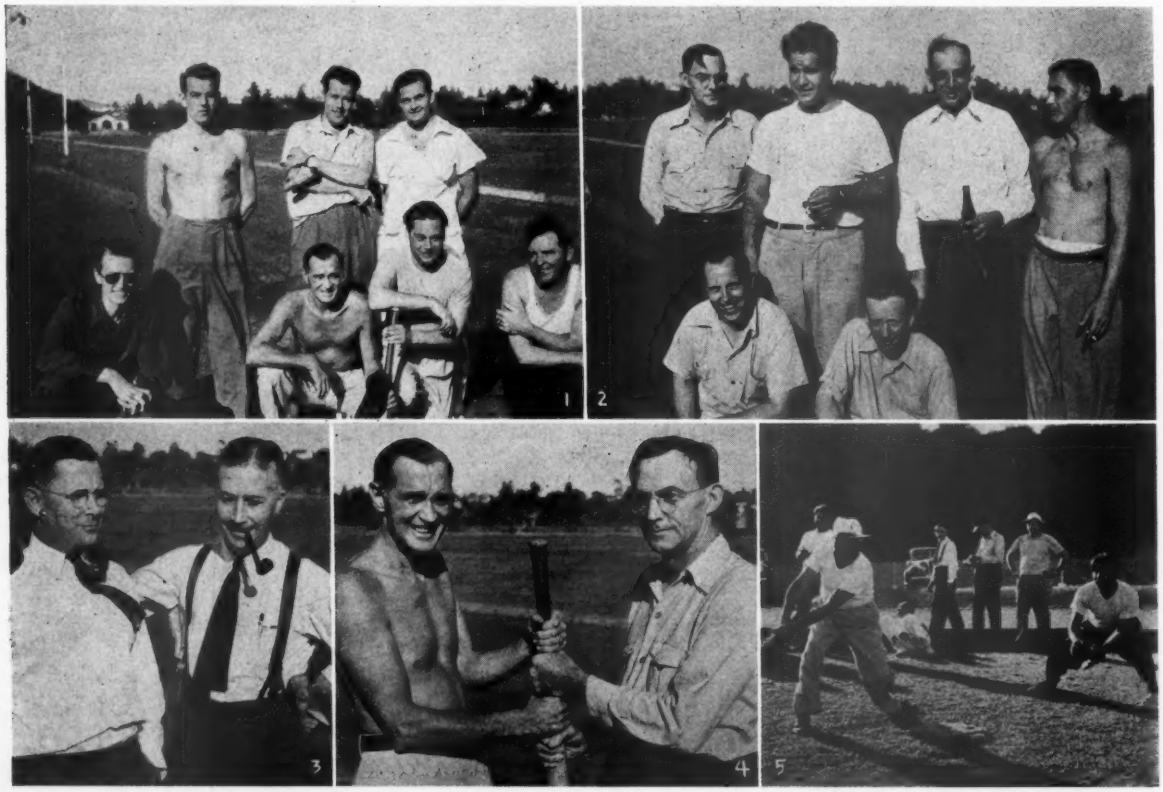
Company, Los Angeles, California; **Badger Paper Company**, South Gate, California; **Bakers & Confectionery Supply Co.**, Los Angeles, California; **J. H. Ball Wholesale Co.**, Glendale, California; **Barnum & Flagg Co.**, San Bernardino, California; **Blake, Moffitt & Towne**, Los Angeles, California, San Diego, California; **Brin Bros**, Los Angeles, California; **Brunswig Drug Co.**, Los Angeles, California; **Buel-Town Company**, San Diego, California; **California Grocery Co.**, Los Angeles, California; **California Hardware Co.**, Los Angeles, California; **California Tobacco & Supply Co.**, Long Beach, California; **Cann & Company**, Los Angeles, California; **Carpenter Paper Co.**, Los Angeles, California; **Cash Wholesale Tobacco Co.**, Los Angeles, California; **Central Paper Co.**, Glendale, California.

Certified Grocers, Los Angeles, California; **Channel Paper & Supply Co.**, Santa Barbara, California; **Glen L. Clark. Co.**, Long Beach, California; **Colonial Wholesale Grocery Co.**, Los Angeles, California; **Corcoran Paper Co.**, Long Beach, California; **Eastern Wholesale Grocery Co.**, Los Angeles, California; **Easterday Supply Co.**, Los Angeles, California; **Fred H. French Paper Co.**, Los Angeles, California; **Fricke & Peters**, Long Beach, California; **General Paper Co.**, Los Angeles, California; **Merle Graybill**, Pomona, California; **General Woodenware Corp.**, Los Angeles, California; **Great Atlantic & Pacific Tea Co.**, Los Angeles, California; **Guevara Bros.**, Los Angeles, California; **Haas Baruch & Company**, Los Angeles, California, San Diego, California, El Centro, California; **E. E. Hoagland Co., Ltd.**, Long Beach, California; **Hollywood Paper Co.**, Hollywood, California.

Ingram Paper Co., Los Angeles, California; **Interstate Wholesale Grocery Co.**, Los Angeles, California; **Juillard-Cockcroft Corp.**, Ventura, California, San Luis Obispo, California; **Gordon Jenkins Co.**, Los Angeles, California; **D. F. Joehnck**, Santa Barabara, California; **Kelly Paper Co.**, Los Angeles, California; **Klauber Wangenheim Co.**, Los Angeles, California, San Diego, California; **La Salle Paper Co.**, Los Angeles, California; **Alfred M. Lewis Co.**, Riverside, California; San Diego, California; **Los Angeles Drug Co.**, Los Angeles, California; **Margolis Bros., Ltd.**, Los Angeles, California; **Marmion & Co.**, Long Beach, California; **McKesson & Robbins, Inc.**, Los Angeles, California; **Pacific Pulp & Paper Industry**, Los Angeles, California; **Pacific Chemical Co.**, Los Angeles, California; **Pacific Wholesale Grocery Company**, Los Angeles, California; **Ralph's Grocery Co.**, Los Angeles, California; **Rand, Halpin & Hibler**, Santa Maria, California.

W. B. Reynolds, Los Angeles, California; **Roberts Public Market**, Venice, California; **I. Rudin & Company**, Los Angeles, California; **S. E. Rykoff & Co.**, Los Angeles, California; **Safeway Stores, Inc.**, Los Angeles, California, San Diego, California; **M. Sakamoto Co.**, Los Angeles, California; **San Diego Paper Co.**, San Diego, California; **Sawelson Wholesale Co.**, Los Angeles, California; **W. A. Scheniman Paper Co.**, El Centro, California; **Sierra Paper Co.**, Los Angeles, California; **Smart & Final Co., Ltd.**, Wilmington, California, Santa Ana, California, Glendale, California, San Bernardino, California; **Southern California Disinfecting Co.**, Los Angeles, California; **Southern California Wholesale Grocery Co.**, Los Angeles, California; **Spartan Grocery Co.**, Los Angeles, California; **R. E. Spriggs Co.**, Los Angeles, California; **State Wholesale Grocery Co.**, Los Angeles, California; **Stationers Corporation**, Los Angeles, California; **Stockwell-Binney Company**, San Bernardino, California, **Taverner & Fricke**, Los Angeles, California.

Three Star General Supply Company,



The softball game between the Jobbers and the Mill Men prvided a lot of fun. No. 1, the Jobbers' team, front row, left to right, JOHN McCLERNAN, BOB WHITING, Captain; AL SIMONS and JERRY MADIGAN. Back row, BILL CLOSE, BILL BRUNAUGH and ANDY DEAN. No. 2, the Mill Men's team, left to right, front row, MELVIN MOWRER, PETE SPENZER. Back row, VERNER MOORE, Captain; ELLIS AMMANN, GEORGE SKLEBA and FRANK GLADDEN.

No. 3, The Umpires before the game, ROY GUTE (left) and BILL McBRIDE. Judging from the look of confidence on Roy Gute's face, he might have suspected he was going to win the grand prize of $500 on the Christmas Fund tickets a few hours after this snapshot was taken. No. 4, The Captains, BOB WHITING and VERNER MOORE, strangling the bat.

No. 5, President of the Paper Mill Men's Club, LESTER REMMERS, a southpaw, took one off his knees for a basehit.

The score? Officially announced as 1 to 0 in favor of the Jobbers.

Los Angeles, California; **Trade Supply Co.**, Santa Monica, California; **Union Hardware & Metal Co.**, Los Angeles, California; **Union Paper Supply Co.**, Los Angeles, California; **United States Hardware & Paper Co.**, Los Angeles, California; **United Jewish Retail Grocery Co.**, Los Angeles, California; **United Supply Co.**, San Diego, California; **Upholstery Supply Corp.**, Los Angeles, California; **John Vanderzyl**, Riverside, California; **Wellman Peck Co.**, San Diego, California; **West Coast Bakers Supply Co.**, Los Angeles, California; **Western States Supply Co.**, Los Angeles, California; **Wilson Paper Company**, Los Angeles, California; **Weil Paper Company**; Los Angeles, California; **Zellerbach Paper Company**, Los Angeles, California, San Diego, California.

Finally, Joe, I want to give you a couple of little ditties that Hays Rehm of the program committee dashed out and put in at the tail end of the program. I thought they were good. Timely too. You'll find them enclosed.

Well, that just about winds things up. Except, I'd like you to look over the snapshots of some of the fellows who were there for Hi-Jinks day and evening. Among the golfers, I know that Marv Vanderheiden and Charlie Spies, Emil LeVigne and R. C. Larson made up a snappy foursome. I saw Larson sink a putt that woulda put Olin Dutra to shame. And then Don Edmond and his buddies, M. M. Carver, A. Applebaum and H. R. Kornberger also were on the greens with some nice drives. But all those guys are so darned good looking that I'm not sending you their pictures, because I'm jealous!

Well, that's the story of the Hi-Jinks. It was a honey, and I sure hope we'll be able to get together there next year and take in these activities again. This turned out to be quite a letter and now I don't have to write you for a long time. Unless I run completely out of paper and have to ask you to run some through special for me

Yours,
Tom

Tom Moran Transferred to Everett

● Tom Moran, formerly project chemist in the control laboratory, Longview Mill, Pulp Division Weyerhaeuser Timber Company, Longview, Washington, transferred to the Weyerhaeuser mill in Everett, where he is now continuing his work as project chemist.

Pacific Coast Paper Mill Girls Take Marriage Vows

● Marriage claimed three members of the office staff of the Pacific Coast Paper Mills in Bellingham during the summer months. Miss Ruthe Fite, stenographer, married Mr. Thomas Hurley, a papermaker, at a ceremony in Seattle on July 16th.

Miss Catherine Porter, also a stenographer, married Mr. Paul Walton, sales manager of the Northwest Hardware of Bellingham, at services in Seattle on September 21st.

Miss Mary Marette, niece of Mr. J. J. Herb, president of the Pacific Coast Mills, married Mr. Allen Knight, Jr., son of Mr. Allen F. Knight, Sr., an executive of Northwest Hardware of Bellingham, at Assumption Church on September 27th.

Port Angeles Service Pins Presented by J. D. Zellerbach

Head of Crown Zellerbach Corporation emphasizes importance of the paper industry in the defense program.

● The important role played by the paper industry in national defense was stressed by J. D. Zellerbach, president of Crown Zellerbach Corporation, in talks at a service pin dinner and a Chamber of Commerce civic meeting in Port Angeles, Washington, when he visited there on October 6th.

Mr. Zellerbach pointed out that the federal government now is the industry's largest single consumer. He gave interesting illustrations of the many ways in which the government is making use of large qauntities of pulp and paper products. One notable reference was that construction of a naval destroyer requires 15 tons of paper for blue prints, alone.

Mr. Zellerbach warned that defense and "good neighbor" requirements will result in a shortage of several million tons of pulp and paper in the United States during the coming year. He revealed the industry is charged under the "good neighbor" program with supplying the needs of South America and other nations not under axis control, which market previously was largely supplied by Scandinavian countries. These new markets may be lost to the North American industry after the war, he said, but must be taken care of now.

The Port Townsend Division, he said, is manufacturing large quantities of cement bag paper for use in transporting cement from plant to defense projects.

Mr. Zellerbach addressed a capacity crowd at the Chamber of Commerce luncheon meeting. Resident managers of the three Port Angeles pulp and paper plants were introduced at the session—R. A. Dupuis of Port Angeles, Division of Crown Zellerbach, A. W. Berggren of Rayonier Incorporated and R. E. Bundy, Fibreboard Products.

Sixty-two employees of Crown Zellerbach Corporation in Port Angeles received service pins from Mr. Zellerbach at an evening dinner meeting held at the Port Angeles Golf Club. Resident Manager R. A. Dupuis presided. M. R. Cashman, personnel and safety supervisor, introduced the men.

More than 80 per cent of the Port Angeles plant's employees now possess service pins for five years or longer, Mr. Dupius disclosed in his introductory remarks. Nine men received 20-year pins at this dinner.

Twenty years—Rudolf W. Diedrich, Thomas B. Hargreaves, Eugene Henderman, Archie J. Hooper, Roy H. Johnson, Charles M. Kepford, Winston L. Kidd, Joe A. Murphy, John C. Romick.

Fifteen years—Joseph Adamich, William C. Adams, Richard T. Apps, William T. Belford, Eugene G. Blais, Fred Bombadier, Roy W. Britton, Orvel S. Cauvel, Victor J. Enfield, Earl P. Gillespie, Philip A. Henderson, Charles S. Homer, Claude M. Homer, David J. Moffat, Keith A. Neer, Wallace M. Newsom, Ray Sherwin, Oliver W. Snelgrove, John V. Venables, Leslie E. Whitty and W. Moresby Wright.

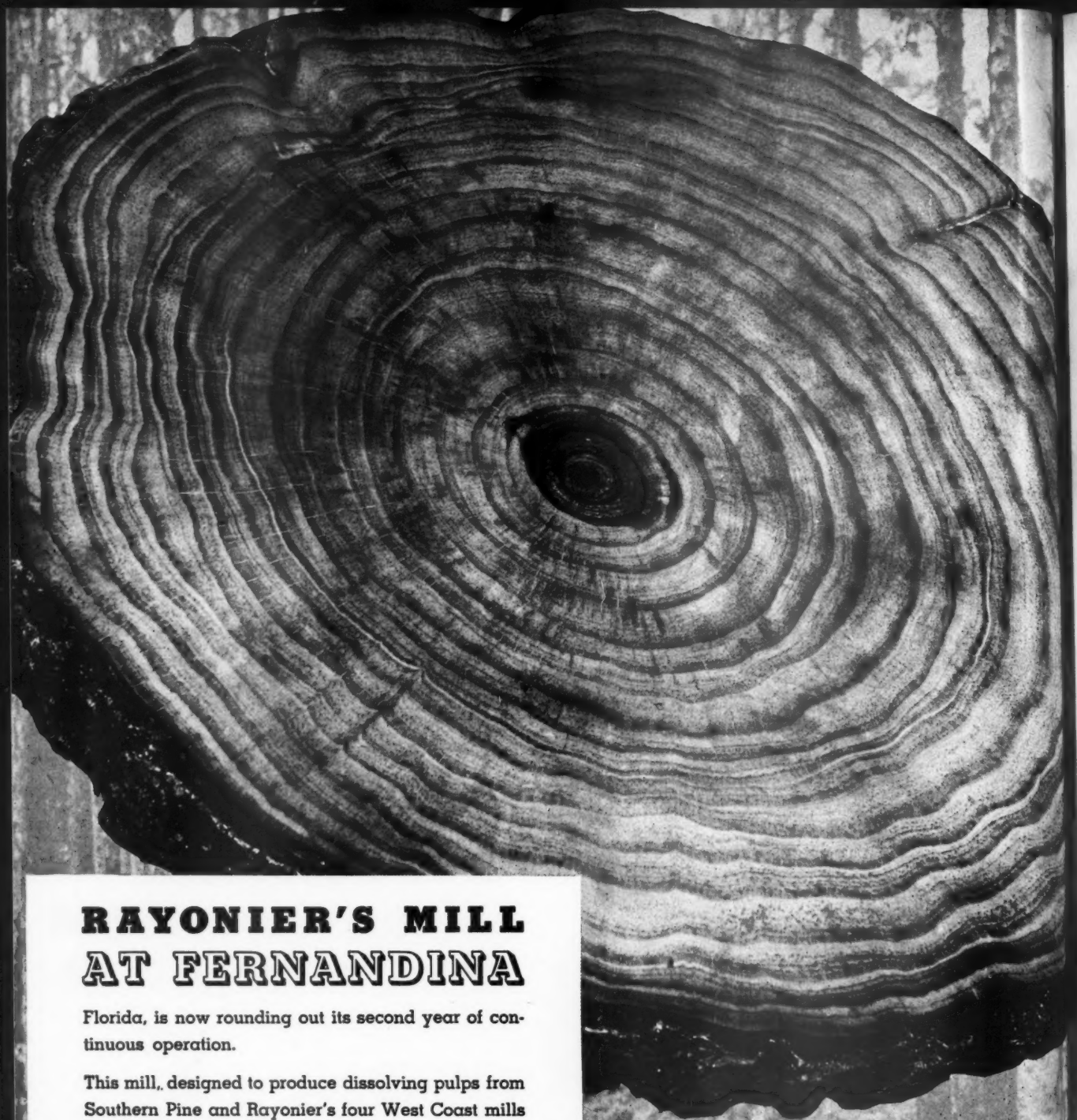
Ten years—Herbert J. Ahiers, Earl T. Cashman, Nick Chryst, Wilfred H. Gaboury, Roland E. Gribble, Frank M. Hutchison, Doran Jackson, Horace G. Phillips, Page M. Rowland, Leslie E. Warwick, Carl P. Weisse, Chester W. Wilbur and Charles Overholt.

Five years—Marion L. Alsbury, Virgil F. Beardon, Edgar C. Burns, Guy B. Decker, G. Wesley Garling, Robert L. Gore, Raymond G. King, Howard E. Kirby, Carsten L. Larsen, Amzy L. Logan, James C. Lundy, Clarence H. Mack, Myron W. McCormick, Charles Overholt, Edward A. Rushford, Burton G. Schroeder, Charles R. Shepherd, Harold Suslick, Dale E. Thomas, George W. Ulin and Eugene C. Williams.

Some of the men are at present away in the service of our country. Charles R. Shepherd, at home on leave from his army station at Salt Lake City, was able to attend and receive his pin.

Rau Goes On Deer Hunting Trip

● Irving T. Rau, secretary-treasurer, St. Helens Pulp and Paper Company, St. Helens, Oregon, left, September 26th, to go deer and antelope hunting in the Steens mountains with five St. Helens business men.



RAYONIER'S MILL AT FERNANDINA

Florida, is now rounding out its second year of continuous operation.

This mill, designed to produce dissolving pulps from Southern Pine and Rayonier's four West Coast mills manufacturing dissolving and paper pulps from Western Hemlock, are providing raw materials of vital importance for civilian and defense requirements.

Along with other leading domestic industrials, Rayonier is extending full cooperation to accelerate our National Defense Program.

★ ★ ★

Illustration above is a cross section of twenty year growth of Southern Pine. The actual diameter of this cross-section is 27 inches. On its fast growing timber stands in the South, Rayonier's selective cutting and conservation programs are designed to provide a continuous domestic supply of pulpwood.

RAYONIER
INCORPORATED

Better Pulps for Better Performance

Mills: Hoquiam, Port Angeles, Shelton, Tacoma, Wash. and Fernandina, Fla. • *Executive Offices:* 343 Sansome St., San Francisco • *Sales:* 122 East 42nd St., New York

Coast Men Attend Ann Arbor TAPPI Meeting

• A dozen Pacific Coast men attended the Fall Meeting of TAPPI at Ann Arbor, September 16th to 19th inclusive. Held on the University of Michigan campus, the meeting, under the general chairmanship of Ralph A. Hayward, vice president of TAPPI and president of the Kalamazoo Vegetable Parchment Company, featured talks on problems of the day, priorities, raw materials supply and prices.

The technical program was timely and well balanced including papers on subjects faced by mill operators these days as, "Making the Best Use of Existing Power Equipment," "Metals Situation," "Substiute Materials," "Preventive Maintenance for the Paper Machine," and "Labor Relations."

The women's program was more extensive than at previous TAPPI Fall Meetings, emphasis being laid upon instruction rather than upon entertainment. The 600-odd men and women who attended felt, after the four-day session, that their time had been profitably employed, and that after all, is the true measure of a convention.

The men from the Pacific Coast who went to Ann Arbor and took part in the Fall Meeting were Dr. Henry K. Benson, executive officer of the Department of Chemistry and Chemical Engineering, University of Washington, Seattle; G. S. Brazeau, manager, Everett Mill, Pulp Division Weyerhaeuser Timber Company, Everett, Wash.; Bruce F. Brown, Jr., chemist, Fibreboard Products Inc., Vernon, Calif.; John A. Flynn, works manager, Hooker Electrochemical Co., Tacoma; Ray S. Hatch, director of research, Weyerhaeuser Timber Co., Longview, Wash.; Dr. Harold H. Houtz, central technical laboratory, Crown Zellerbach Corporation, Camas, Wash.; H. W. Hall, The Dicalite Co., Seattle; Max R. Oberdorfer, assistant manager, St. Helens Pulp & Paper Co., St. Helens, Oregon; J. F. Smith, sales manager, Great Western Division, Dow Chemical Co., San Francisco; Lawrence K. Smith, manager, Pacific Pulp & Paper Industry, Seattle; Earl G. Thompson, Pacific Northwest manager, Great Western Division, Dow Chemical Company, Seattle; and, Edward P. Wood, technical director, Longview Mill, Pulp Division Weyerhaeuser Timber Co., and vice chairman of the Pacific Section of TAPPI.

Dr. Benson presented before the Acid Pulping session a paper prepared by himself, A. J. Bailey and Irwin A. Pearl of the University of Washington entitled, "Further Studies on the Desulphonation of Calcium Lignosulphonate."

Taking the spotlight because of their timeliness were these talks: "The Paper Industry and National Defense," by D. Clark Everest, pulp and paper industry advisor to the OPM; "Current Economic Tendencies and Conditions in this Country," by Virgil Jordon, chairman of the National Industrial Conference Board; "The Work of the American Paper & Pulp Association," by J. L. Riegel, president of the association; "Current Problems of the American Paper & Pulp Association," by E. W. Tinker, executive secretary of the association; "Price Control Policies," by H. F. Taggart, asssistant director, Office of Price Administration; "Substitute Materials," by Colonel G. S. Brady, coordinator for important substitute materials, OPM; and "General Policy of the Office of Production Management," by Norbert A. McKenna, chief of the Paper Section of OPM.

A session of exceptional interest was the Executive Round Table Discussion led by Ralph A Hayward as chairman, and participated in by H. F. Taggart, Norbert A. McKenna, D. Clark Everest, E. W. Tinker and J. L. Riegel.

The convention was opened with a message from D. Clark Everest which was read by Mr. Hayward as Mr. Everest was unable to attend and deliver it personally.

Mr. Everest's statement:

"I regret sincerly my inability to be present at your meeting. I had hoped to be able to present to you the situation in relation to the pulp and paper industry as it exists today.

"When I spoke to you in New York in February I outlined many of the things which the Office of Production Management thought would happen in the future. Unfortunately all of these things developed faster than anticipated and extended into many items which were not anticipated at the time. It is well to remember that having shortages occur in civilian supply is only an indication of the progress being made in defense supply. Up to a compartively short time ago but little of our paper and paperboard products entered into defense use, and there was but mighty little spent for defense or even the bare maintenance of the Army and Navy.

"Since June, 1940, this pitcure has changed and there has been a constantly increasing amount of our products entering into direct and indirect defense items. This, in my opinion, is only the beginning. The estimated demand for 1942 is staggering. It will require all the technical and engineering brains in the industry to cope with this situation.

RALPH A. HAYWARD, General Chairman TAPPI Fall Meeting at Ann Arbor.

"Heretofore, I have always been urging the development of new products. This situation may also entail research and development, but perhaps along different lines. We must now start with basic raw materials, pulp wood, rags, straw and waste paper and make these go as far as possible in the production of the resultant pulps. Having these pulps we must again make them go as far as possible in producing paper and paperboard. Regardless of the fact we sell our products by the pound, everything entering into packaging or printing is sold by the square foot. A book, magazine or box is square feet of surface. The technicians of all paper and paperboard conversion plants must find some way to reduce the basis weight of material or the size of the article thus extending the square feet coverage. This will probably cut down the tonnage production of the machines, but it gives more coverage per ton of pulps used, and this is what must be done if we are to come within shooting distance of supplying the demand from now on.

"I also urge you to survey your own methods of packaging and endeavor to effect every possible economic saving you can make.

"Those of you who are engaged in pulp manufacturing should do everything possible to increase digester yield per day. It may seem silly to suggest some of these things to a very able and intelligent group of technical people, but this whole thing has developed so rapidly that some people engaged in their regular business have not yet realized the seriousness of the situation. I wish to emphasize that it is serious and that never before in the history of this country have we been in such a desparate situation with relation to our supplying the country's demand both for defense and civilian use.

"I regret not being able to present the situation in person, but Mr. McKenna, chief, Pulp and Paper Branch, will be with you and will tell you the whole story.

"I again urge you to do everything possible to assist us in the conservation of the use of pulps, paper and paperboard and knowing your ability to make 'two blades of grass grow where one grew before' I am confident you will contribute everything you have in an 'all out' effort to help us."

The talk by Norbert A. McKenna was similar in content to his talk before the National Paper Trade Association convention in Chicago which was reported in the Chicago Tribune as follows:

"A potential shortage of 5 million tons of paper products in 1942 was reported by Norbert A. McKenna, chief of the pulp and paper section of the Office of Production Management. His estimate was based on a demand and supply analysis made at the direction of the Supply Allocations and Priorities board.

"He presented the analysis at the general industry meeting at the opening of the three-day fall convention of the National Paper Trade Association of the United States in the Stevens Hotel. Officials of the paper merchant group asserted that attendance of more than 400

members was the largest since the days when NRA regulations were an industry problem.

Admits It's Just a Guess

"McKenna said that total demand from both government and private sources next year was estimated at 26 million tons of paper products and that the industry can produce 21 million tons, including Canadian newsprint and using all available capacity.

"He said it was difficult to forecast military demand, but that the estimate included in total demand was computed by multiplying it one and a half times. The factor of one and one half times was used, he explained, because arms spending is now at the rate of one billion dollars a month and is expected to rise to 1½ billions by the middle of next year.

"To overcome the anticipated shortage in paper goods of all kinds, McKenna urged the paper industry to standardize its products, conserve supplies and reduce the amount of pulp going into the same amount of paper.

Urges Self-Regulation

" 'We want to make a ton of pulp stretch farther even if we have to make paper that you can look thru,' he said. 'We will do everything possible to avert dislocations and regimentation. We can avoid bureaucratic control by cooperating in making the supply go farther.'

"McKenna is vice president and a director of the United Plywood Corporation. He was formerly a general partner in Eastman, Dillon & Co., New York security house.

"As the first step in his program for self rule of the paper industry, which he said was one of the two industries (utilities are the other) untouched by government allocations, he appointed a ten-man advisory committee to offer his OPM section rules of practice for the paper merchant group.

Warns of Bureaucratic Rule

" 'Industries have been aborted and distorted by priorities,' McKenna said. 'We see priorities unemployment spreading in the country. The paper industry has a chance to avoid this. You can adjust yourself to the preparation for war with a minimum of disturbance. Our OPM section is dedicated to save the 60,000 propietorships and the 800,000 jobs in the paper industry.

" 'We desire to leave the administration of industry to itself and keep government interference at a minimum. Business can do the job better than government. The alternative is allocations, priorities and bureaucratic control'."

Taggart Talks on Prices

● H. F. Taggart, assistant director, Office of Price Administration, spoke on, "Price Control Policies." A summary of his talk follows:

"The title of this talk could well have been 'The Lesser of Two Evils.' When the emergency price control bill was introduced into Congress a few weeks ago the New York Times made the following comment: 'President Roosevelt's proposal for virtually over-all control of commodity prices was received with reluctant approval by many business men yesterday, even though they are traditionally opposed to any extensions of government controls over business—the general view was that price control is the lesser of two potential evils . . . the other being dangerous inflation.' Having been brought brought up in a very old-fashioned school of economic thought myself, I can't help having a sneaking sympathy with the business men. I was taught that the price mechanism is the great regulator of our system of free enterprise, and that it works best when left alone. 'Don't monkey with the thermostat,' was a favorite saying of 'Old Freddie,' as we used to call our professor of economics.

"In view of the legislation pending in Congress, the activities and policies of the Office of Price Administration are very properly being subjected to intense scrutiny. If protection of the American economy from the desparate consequences of inflation is to be entrusted to any organization, it is only reasonable that the actions of that organization should be reviewed for the purpose of determining what its policies have been and of forecasting what they may be expected in the future.

"To my way of thinking a very significant characteristic of price administration to date is the reliance which has been placed on voluntary action by industry in preference to rulings imposed by authority. A number of reasons for this attitude might be adduced, but to me, one of its most important aspects is its reflection of a fundamental unity between industry and the administration as to the vital necessity of putting a stop to inflation before it gets a start. Nobody wants a repetition of what has occurred during and after every major war, and especially not of what we all remember during the period 1915-1921. So vivid is the recognition of the importance of this effort that far-seeing business men are entirely willing to sacrifice some apparent temporary advantage to be gained by raising the prices of their particular products for the sake of the far greater long-run gains of price stability. Thus, our staunchest supporters are the very people who would appear to be in a position to gain most by a breakdown of the price control machinery.

"It might be supposed that voluntary agreements were resorted to because of the lack of specific legislative authority to control prices—in other words, that they are a sign of weakness. As a matter of fact, quite the contrary is probably true. I look for a greater rather than a smaller use of the voluntary method after price control legislation is passed.

"The paper industry affords, in its several branches, excellent examples of the advantages of voluntary agreements and, I am sorry to say, at least one example of a total failure of this procedure.

"A study of the prices with which we have thus far been chiefly concerned reveals a determination to put first things first. Three kinds of prices have engaged our principal attention: those which have the broadest effect upon the economy as a whole, such as steel and other basic raw materials; those which are most volatile and subject to speculative influences, such as secondary metals and items traded in on the commodity exchanges; and, finally, those which constitute the costs for later stages in production. This last preoccupation is one of our most important sources of strength, whenever it is possible to show converters and fabricators that we have been of assistance in keeping costs down.

"It would be a mistake to assume that the Office of Price Administration is interested only in low prices. We intend to keep prices down, but not at the expense of production. In certain cases we have watched prices rise with the greatest equanimity, since it was evident that only by increase in price could we obtain that expansion of production which is the basic requirement of the defense effort and, in the long run, of price stability. Such cases are few, however, and it is equally true that in many fields increased prices do not bring out added supplies. In fact, the expectation of increasing prices serves to dry up supplies by giving rise to inventory accumulations and speculative hoarding. One of the best cures for hoarding is a certain knowledge that the price is not going up.

"A cardinal principle of OPA is that price increases solely caused by increased demand will not be tolerated. Where price increases are not justified either by increases in costs or by the reasonable hope of increased supply, but are solely occasioned by the fact that supply is short as compared to demand, no sympathy need be expected. Sometimes the party who increases his prices under these circumstances says that he is merely trying to discourage excessive demand—he is merely fighting off too insistent customers. However effective such a move may be in normal times, it has no effect now. Demand is inelastic. The buyer will pay whatever is asked in order to assure himself a supply. Buyers are, in many cases, just as guilty as sellers of pushing prices up. When a user of raw material sees his inventory slipping, and he is afraid of shortage of transport and other problems of supply, he is likely to bid prices up. That, in fact, is perhaps the most serious single problem of price administration.

"Two other attitudes of OPA with regard to causes or excuses for price increases are worthy of comment. One is that, although we recognize the importance of actually sustained increases in costs, we look very unsympathetically at the notion that prices must be increased now to take care of vaguely defined cost increases which are expected at some indefinite time in the future. We fully appreciate the forward seller's difficulties, but both the common practice of quoting no prices at all and that of adding a substantial cushion to cover unforeseen events are direct roads to the inflation and spiralling of prices which it is our job to prevent. Both practices are an open invitation to step in with a price schedule.

"Another argument with which we are frequently confronted is that the particular concern or particular industry has suffered heavy losses over past years and must now be allowed to make up these. A variation of this is the argument that the industry in question is one in which seven lean years follow every fat one. This—the year 1941—is the proverbial fat year, and we must let industry put on a little fat to take care of the lean years ahead. There are several answers. One is that, after all, this fat year is a result of the defense program. It is not a natural, but an artificial business boom. The principle has been enunciated that we are to have no war-time millionaires. The putting on of fat, therefore, must be in strict moderation. Another answer is that already the Congress has made the putting on of fat a pretty difficult operation, and that the surest way of creating sentiment for making it impossible is the attempt to obtain abnormal profits by excessive prices.

"My particular responsibility in the OPA is the cost aspects of price control. The cost accounting staff of OPA which started out with one man in June of 1940, now numbers approximateiy 30, with more being added daily. Most of the time of these people is being spent on the problems of individual firms which for one reason or another find themselves in some special position with respect to price agreements or price schedules. Industry-wide surveys have, for the most part, been conducted for us by the accounting staffs of the Tariff Commission and the Federal Trade Commission. Many of you will recall that accountants employed by the Federal Trade Commission carried on most of the cost studies in connection with price control during World War I. For this purpose they employed a staff of some 300 accountants.

"The cost accounting or, more precisely, cost analysis work in connection with price control may be roughly divided into three categories. The first consists of cost studies made in contemplation of either formal price schedule or voluntary ceiling agreements. No such arrangement is ever entered into without giving consideration to the cost factors involved, although, as I shall shortly point out, nothing like an exhaustive cost study is undertaken at this stage.

"The second variety of cost study takes place after the schedule or agreement has been established. Its purpose is to discover how the prices are working and to prepare the ground for revisions or modifications. Such surveys may be industry-wide in scope, but they are ordinarily carried on by means of sampling. Concerns are chosen for study with an eye to obtaining representation as to size, location, variety of products, and methods of operation. Based upon such studies are decisions as to the adequacy of the chosen prices to yield a fair return, the reasonableness of differentials based on grades of product, quantities of sales and other factors, and the desirability or necessity for raising or lowering the established levels of prices.

"The third kind of cost study deals with the problems of individual enterprises. In its most complete form it involves a thorough examination of costs, sales, markets, operating problems and policies, and financial history and position. The purpose is to discover whether the particular concern requires relief or other special treatment in connection with established price schedules or announced price policies. Usually such studies result in some sort or adjustment for the particular concern, but they occasionally show the need for changes in the price schedules or price policies.

"These individual studies have, up to the present, taken a very large portion of the time of the accounting staff of OPA. They unquestionably constitute the most interesting part of our work, since they comprehend the whole range of business analysis, and not merely a study of accounting data.

"Such studies originate most frequently after an official price schedule has been promulgated. Price schedules necessarily apply to everyone in an industry on a uniform basis. However, it is recognized that such universal rules, if inflexibly applied, may result in serious hardships to individual concerns. Hence, an invitation is always extended to present such hardship cases for special consideration. Figures and other data are examined; legal, marketing and engineering considerations are given due weight; a report is written, accompanied by a recommendation to the Administrator that the particular type and extent of relief desired should or should not be granted. Such relief has already been extended in a considerable number of cases.

"It can easily be imagined that the detailed problems of the relation of costs to prices which have already been encountered would fill a good-sized book. One of the most fascinating parts of our job lies in the fact that we must look into the future—we must try to see how a certain set of circumstances and a certain course of action may be expected to affect both the financial status of our 'clients' and the supplies of the commodities which we want them to produce. A highly developed imagination is an essential qualification for employment in our accounting division.

● "I always like to spend a few minutes of each talk I give speculating on what our chances are of doing a respectable job of controlling the inflationary spiral. No one supposes that we can do a perfect job. The problems are too complex and the forces at work too powerful. There is much evidence already, however, that the Price Stabilization Division was not established in May, 1940, entirely in vain. It is easy to point to specific prices which are lower today than they would have been without our efforts.

"Our greatest source of strength lies in the fact that in the long-run self-interest of every element of society has a huge stake in our success. The farmer will not profit by higher prices for his produtcs if the prices of everything he buys go up correspondingly. The worker's economic status is not improved unless his real wages are maintained. The business man remembers with a shudder the inventory writedowns of 1920 and 1921. Our greatest weakness lies in the fact that many of these people have the idea that somehow they will be able to get their prices up while others stay down —the idea that somehow they will be able to steal a march on the other fellow. Price control receives their wholehearted support—when applied to their neighbor's prices!

"In spite of obvious difficulties and complexities, in spite of many disappointments already experienced, I continue to be moderately optimistic. We have studied the experience of the other nations and of the last war assiduously. We think we know where some of the mistakes were made and how to avoid them. We have gotten a much earlier start than did our predecessors in 1917, and we already have a veteran organization. Accoutning and statistical data are much more complete, reliable and available than they have ever been before. Other powerful government agencies are solidly back of the fight against inflation and are in a position to supplement our efforts by actions tending to cut down demand or to decrease supply. With all these things in our favor we at least have a fighting change."

What every industry like yours should face on a cooperative basis is the following:

1. Analysis of all basic and processing materials required for the entire industry including quantities, grades, stocks on hand.

2. Separation of this list of material into domestic and imported so that the recommendations can be made for increase in domestic production facilities or substitution for import shortages.

3. Analysis of the possibilities of changing to substitute or alternate materials domestic or imported from more accessible foreign ports.

4. A pooling, or at least an industry cooperation in the laboratory research for other materials or processes to overcome the difficulties of production due to shortage of materials.

5. Cooperative study to recommend that government set definite production limits on non-essential or luxury civilian items so that the available materials will be used for the most essential needs.

Colonel Brady quoted Supply, Priorities and Allocations statement that "we must forego the less essential that we may have an abundance of the most essential.."

On No. 1 above he said if the industry is afraid that it will be prosecuted under the anti-trust laws then it should ask the defense agencies to supervise the job of getting together for analysis purposes.

Research for new materials is normally the business of the individual companies, and often the work is kept secret between companies. But in these times of emergency every industry should work company research laboratories at top speed, always thinking in advance of what the shortages may be next month or next year. There should be less secrecy and more cooperative meetings of the technical men among the different companies with the idea of saving duplication of effort. As far as possible a pooling of research within the industry would save a tremendous amount of work and would result in quicker and probably better work.

Colonel Brady pointed out the need for subordinating the civilian requirements if we are to win the war, and called attention to Japan, Germany, where all luxuries are taken away.

"Pulp is being consumed at a rate of 880,000 tons a month. This is more than 15% higher than the 1939 rate of consumption, and at that time we were getting 15% of our supplies from Scandinavia from which the supply is now cut off. Think of that as sudden load of 30% on the economy of this country and Canada, at a time when we want to turn our attention to a war effort. Little of this extra load is going to defense."

"In my opinion," said Colonel Brady, "the big thing today is the realization that the country must do without some things so that most of the production facilities and labor of the country be concentrated on building up the needed products to make our nation strong and mighty."

Texas Gulf Men Visit Coast Mills

● Two executives of the Texas Gulf Sulphur Company's New York headquarters called on a number of customer sulphite mills on the Pacific Coast early in October, E. C. Meagher, assistant to the president, and A. L. Walker, Jr., of the sales department.

They were accompanied by John M. Fulton, manager of the Pacific Coast Supply Company. Mr. Meagher and Mr. Walker also called on a number of Texas Gulf customers in fields other than sulphite pulping, completing their Coast visit in Seattle October 14th when they began the return trip to New York.

BEAR BRAND CHEMICALS

Pacific Coast Products

BEAR BRAND chemicals for the paper industry are made by the Great Western Division of Dow—the largest plant of its kind on the Pacific Coast.

West Coast sources of labor—West Coast raw materials are used to produce chemical products the paper industry has come to depend on for uniform high quality.

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Cl_2

CHLORINE

Liquefies at -34.6°C. atmospheric pressure. Not over 1.4 lbs. moisture per ton. Total residue not over 15 grams per 100 lbs.

SO_2

SULPHUR DIOXIDE

Colorless gas at normal temperatures and pressures, liquefies at -10°C. at atmospheric pressures.

NH_3

ANHYDROUS AMMONIA

Liquefies at -33.4°C. atmospheric pressure. Contains no objectionable impurities.

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Papermakers Hear Priorities and Printing Discussed

Papermakers and Associates of Southern California hold meeting in Los Angeles, October 2nd.

SOME eighty members and guests of Papermakers and Associates of Southern California met at Scully's restaurant in Los Angeles on October 2nd to hear about the priorities situation as seen by C. S. Jamison, Consultant, Priorities Division, OPM's Los Angeles Office.

Mr. Jamison's talk was followed by two technical talks, one an illustrated talk on "Paper Printing Processes" by Walter Burroughs of Prisma Products, the other (also illustrated) on "Printing on Paperboard" by George F. Ford, manager of the Converting Department of Fibreboard Products Inc., Los Angeles Division. Mr. Ford's paper will appear in an early issue.

The evening session started with dinner. Chairman Herman L. Joachim opened the meeting with an introduction of guests, including Harlan Scott editor of PACIFIC PULP & PAPER INDUSTRY, who was visiting Lo Angeles on a field trip; E. F. Champion, Pioneer Flintkote Company; Jack Johns, Owens-Illinois Co.; John Zippe and Sid Newson, California Ink Co.; F. J. Stephens, United States Gypsum Co.; Leslie Scott and H. S. Lund, Crocker-Union; and Robert Vignolo, California Flaxseed Products Co.

Chairman Joachim introduced Mr. Jamison.

"Before I answer this list of ten prepared questions relating to the priorities situation, said Mr. Jamison, "I should like to make a general statement concerning our efforts. It is this: The priorities system was designed to care for the flow of materials required to satisfy the defense program. At present, the total amount of money approved for defense is approximately 60 billion dollars, 50 billions of which was practically unanimously approved by Congress, 7 billion of which represents the lease-lend allotment, and the remaining 3 billions of which represents British credits.

"We cannot superimpose a war economy on a peace economy. Our present expenditures are at the rate of approximately 16 billions per year, and it is contemplated that they will reach almost 40 billions annually in 1943.

"In short, we are spending approximately 18% of our national income for defense, while Britain is spending almost 69% of hers and Germany approximately 65% of hers in their efforts."

Jamison then outlined briefly the method of handling priorities details. He traced the route of a priorities application to its culmination in the delivery of goods, stating that no priority is issued in advance of a rated need. A specialist in Washington recommends and verifies such rated needs, following which action the way is cleared for delivery of materials, he said.

Ships, Jamison said, are our big need now, and for their construction ratings of A 1-A are in force during this year. In 1942 the rating will likely drop to A1-B, and in 1943 will drop further to A1-C, the speaker declared.

Speaker Jamison declared that everything is taken into consideration by the OPM in priorities practice.

In order to assure supplies of steel, chlorine, copper, cork and other critical materials, Jamison declared, there have been set up general orders which may be followed down to the final degree of procurement.

Priorities Forms

● For the request of materials not covered by such blanket general orders, Jamison declared the PD-1 form is the normal application. The PD-2 forms, sometimes used somewhat as a "substitute," is not extendable down to the final point of procurement. The PD-3 is controlled by the Army and Navy, and is extendable to the final point. The PD-4, known as the "G" series, is used by the Coast Guard, the Panama Canal and for scientific research and the PD-5 for foreign government orders.

"As for you papermakers," Jamison said informally, "I cannot say specifically just where you stand. We cannot state just now your specific position, but as you know, when things are darkest, then comes the light. Washington will protect you, although it seems difficult at times to make every application correctly."

The United States government, Jamison concluded, has established field offices in various localities to assist all business men.

Following his talk, Jamison answered ten prepared questions pertaining to priorities.

Priorities Questions and Answers

1. Q. Under what conditions can PD-3 be extended to cover new machinery?
   A. Generally speaking, a PD-3 certificate cannot be extended to cover new machinery. Such extensions are possible only under specific provisions under the directions of the Army and Navy Munitions Board.
2. Q. What rating will housing projects carry?
   A. The ratings will vary according to substantial need, and are confidential at this time.
3. Q. Do you expect that buying priori-

SEATED AT THE SPEAKERS' TABLE at the October 2nd dinner meeting of PAPERMAKERS and ASSOCIATES of SOUTHERN CALIFORNIA were, left to right, U. GRANT FARMER, Vice Chairman of PASC and Superintendent, Fibreboard Products Inc., Vernon; W. T. "HAP" TILLOTSON, Treasurer of PASC and Superintendent of U. S. Gypsum Company's paper mill at Southgate, Calif.; GEORGE F. FORD, Manager, Converting Department, Fibreboard Products Inc., Vernon.

Center picture, C. S. JAMISON, Consultant, Priorities Division, OPM, Los Angeles; and, HERMAN L. JOACHIM Chairman of PASC and consulting engineer, Los Angeles.

On the right, WALTER BURROUGHS, Prisma Products Co., Los Angeles; CHARLES G. FRAMPTON, Member PASC Executive Committe and Superintendent, Fernstrom Paper Mills, Pomona; and, JOHN VAN OUNSEM, Secretary PASC and Technical Director, Pioneer Division, The Flintkote Company, Los Angeles.

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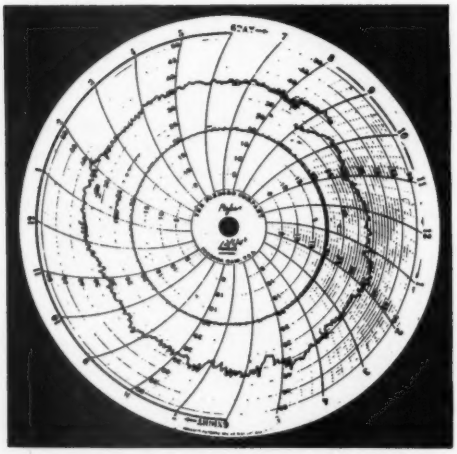

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ties will be supplanted by supply control?

A. The only information available to us at this time is from the source of newspaper releases with which you are probably familiar. It is our understanding that any such change as may be contemplated will be very gradual.

4. Q. Are all laboratories entitled to "A" rating? On what forms should application be made for new materials? Apparatus? Repairs?

A. All laboratories are not entitled to "A" rating. The application for use of general Preference Order P-43, which covers "Research Laboratoies, Supplies and Equipment," must be directed to the Office of Production Management, Social Security Building, Washington, D. C., on Application Form PD-88, and that office determines from the applications those laboratories entitled to use the assigned rating of A-2. The operation of the plan makes adequate provision for obtaining new materials, apparatus and repairs.

5. Q. Is PD-1 the only form that can be used to obtain new machinery for a company that is 25% defense? 50%?

A. Generally, PD-1 is the proper application form to be used for obtaining ratings on new machinery. The percentage of defense work of a company is not a basic determining factor in this connection.

6. Q. How can PD-1 help the supplier replenish his stock?

A. Under certain circumstances, PD-1 form is the only means available for a supplier to request a priority certificate covering material to replenish his stock. If his manufacturer is operating on the Defense Supplies Rating Plan, the manufacturer should keep merchandise on the distributors' shelves, for sale on rated orders.

7. Q. Can supplier refuse to honor PD-1 in case of critical material?

A. The acceptance or refusal of an order accompanied by a PD-1, bearing an authorized rating, is covered in Section 944.2 of Priorities Regulation No. 1, quoted as follows:

"944.2 **Acceptance of Defense Orders.**—Defense Orders for any Material, whether or not accompanied by a Preference Rating Certificate, must be accepted and fulfilled in preference to any other contracts or purchase orders for such Material, subject to the following provisions:

(a) Defense Orders must be accepted even if acceptance will render impossible, or result in deferment of—

(1) Deliveries under non-defense orders previously accepted, or

(2) Deliveries under Defense Orders previously accepted bearing lower preference ratings, unless rejection is specifically permitted by the Director of Priorities;

(b) Defense Orders need not be accepted

(1) If delivery on schedule thereunder would be impossible by reason of the requirements of Defense Orders previously accepted bearing higher or equal preference ratings, unless acceptance is specifically directed by the Director of Priorities;

(2) If the Person seeking to place the Defense Order is unwilling or unable to meet regularly established prices and terms of sale or payment, but there shall be no discrimination against Defense Orders in establishing such prices or terms;

(3) If the Material ordered is not of the kind usually produced or capable of being produced by the Person to whom the Defense Order is offered;

(4) If such Defense Orders specify deliveries within fifteen days, and if compliance with such delivery dates would require the termination before completion of a specific production schedule already commenced."

8. Q. What percentage of gross volume must manufacturer have to obtain "A" rating on P-25 form to cover repairs?

Can this rating be applied to new machinery? Replacement machinery?

A. The question is not clear enough to be answered, as there is no form identified as P-25. If we are to assume the question refers to form PD-25 (Defense Supplies Rating Plan), provision for repairs, new machinery or machinery replacements is not included. However, provision has been made for consumable tool requirements.

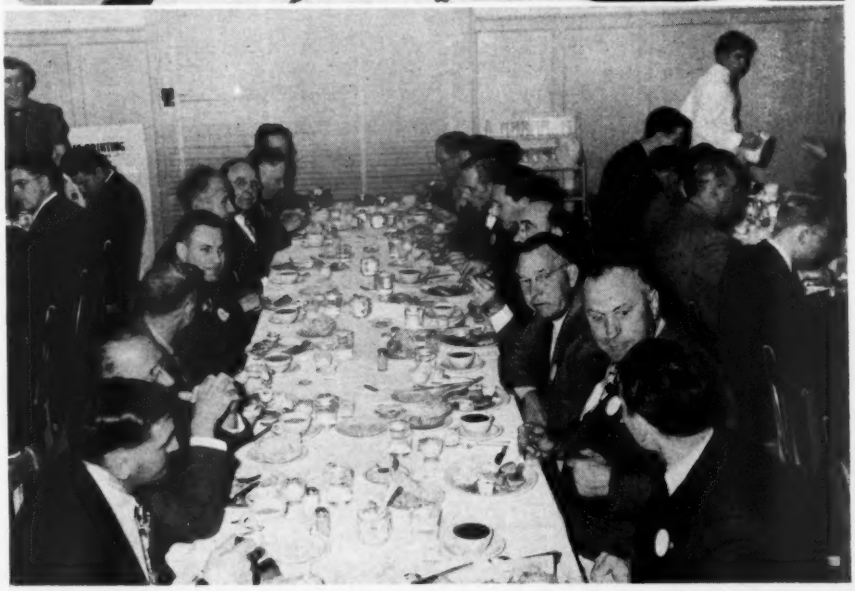


TABLE GROUPS at the October 2nd dinner meeting of the PAPERMAKERS and ASSOCIATES of SOUTHERN CALIFORNIA.

9. Q. What is Form PD-73? What can be bought with use of this form?

   A. PD-73 is a form which must accompany an order for steel, as defined in Order M-21, placed with a Producer (as defined in Order M-21) and represents no purchasing medium.

10. Q. Why was the pulp and paper industry not included in the A-10 group rating for maintenance and repairs?

    A. If this question presupposes discrimination, we can assure you there was no such intent. We assume from a reasonable standpoint that all industry will be maintained and we expect additional industries to be incorporated within the provisions of maintenance and repair orders.

The following questions asked from the floor were answered by Mr. Jamison:

1. Q. A manufacturer of scientific laboratory instruments outlined his problem of getting only a few feet of a special type of cable used in the manufacture of an instrument containing hundreds of small parts, the problem arising in that his supplier refuses to deliver the small quantities of cable at a time, the minimum economical quantity to produce being five thousand (5,000) feet.

   A. The speaker's answer was: "That is a problem for which there is no remedy at this time."

2. Q. A paper mill executive asked how his mill can go about getting a badly needed boiler.

   A. Mr. Jamison explained that the most expeditious system to follow is for the supplier B to place PD-1 Application in behalf of buyer A, for all component parts essential to the manufacture of the boiler.

At the conclusion of Mr. Jamison's talk, Chairman Joachim expressed the thanks of the organization, and next introduced the second speaker of the evening, Walter Burroughs.

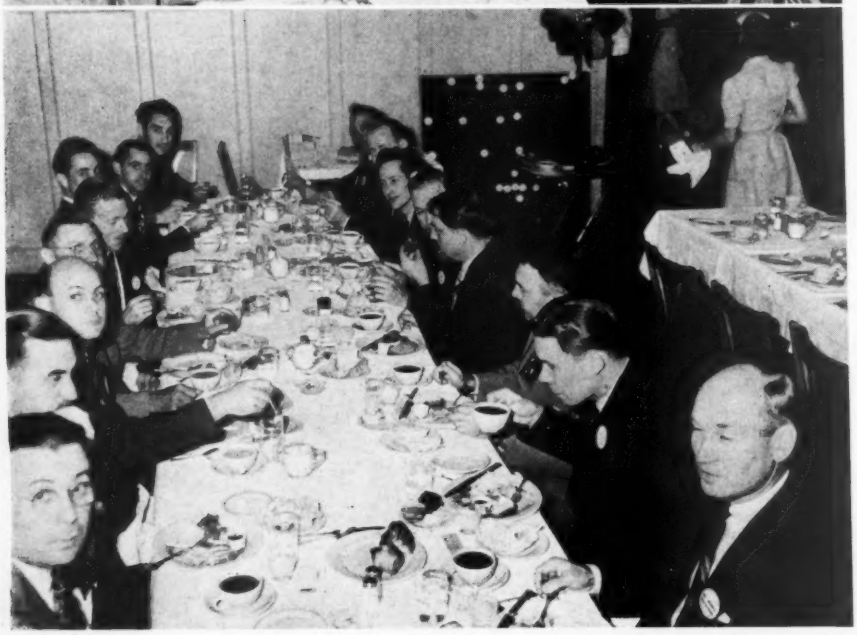


TABLE GROUPS at the October 2nd dinner meeting of the PAPERMAKERS and ASSOCIATES of SOUTHERN CALIFORNIA.

● Illustrating his subject, "Paper Printing Processes," through the use of numerous displays and samples, Burroughs, made a lively beginning to his talk and followed through in an interesting fashion.

Mr. Burroughs, now with Prisma Products, outlined the three printing methods in use today: relief (letter-press), planographic (lithography) and intaglio (rotogravure). After stating that printing's purpose is to provide a visual vehicle through which the beholder may understand something, Burroughs pointed out how the three methods function (relief involves the use of raised type which imprints ink on paper which is also raised, planographic involves the use of stone from which ink is printed in approximately the same plane as the areas not inked, and intaglio in which ink is cloistered or etched in a plate which, when "squeezed" onto paper, allows the ink to stick where impressed).

Burroughs illustrated the range of tones obtainable by various printing methods. He cited the advantages and disadvantages of the three methods, stating that in relief printing the fact of an exact facsimile reproduction is of prime importance; lithography, on the other hand, permits a wider tone in a given color and offers a wider range of paper for efficient usage; roto's advantages are, speed, and the use of cheap papers.

When the chemists and mechanics consolidate their gains, he predicted, the time will come when no drying problem will occur in printing.

Third and final speaker of the evening was George F. Ford, manager of the converting department of the Fibreboard Products, Inc., Los Angeles division.

● Mr. Ford's talk on "Printing on Paperboard," was enlightening and well received. To lead off his prepared presentation, Ford passed through his audience some typical modern calendars, and simultaneously announced that these will be seen to achieve their purpose, namely, the development of "emotion promotion."

At the conclusion of these talks, considerable discussion occurred on various points involved in the subjects. It was stated that 80% of paper produced today is being printed upon, while the balance is used "as is."

Chairman Joachim closed the meeting with the announcement that the next meeting would be held December 11th, the main subject being "Stock Preparation"; with Dick Buckley, chief chemist of Fernstrom Paper Mills, as chairman.

Bud Hall Wins Big Suggestion Award

● George Charters, assistant manager, Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, Camas, Washington, presented Bud Hall, paper mill employee, with a check for $150 at a subforemen's meeting in September. This award was made for an idea submitted some time ago, suggesting the reinforcing of wood flights on mill conveyor chains to keep them rigid.

B. E. Barnett received a $16 award for his suggestion to use case hardened brake drums for beater auto trucks. This was an additional award. Another additional award of $10 went to A. K. Jones, for his suggestion of improvement in brouter operation.

Other employee awards include $5 each to Bill Fritz, Art Hughes, and Tony Pleiss. Awards of $2 went to J. J. Akins, Carl Aslin, G. R. Betts, George A. Charters, Alvin Doyle, L. R. Dungan, Sr., Elmo Eby, Mike Frye, J. T. Hunter, A. B. Irvin, Emil J. Iverson, G. E. Johnson, V. C. Karns, Paul Rainy, H. Rickard, Howard Rondeau and B. E. Sullivan.

Frank Hedberg Back on the Job

● Frank Hedberg, shift foreman at the Puget Sound Pulp & Timber Company is rapidly recovering from a serious abdominal operation performed September 2nd. Hedberg expects to be back on the job around the middle of October after spending nearly a month in St. Josephs Hospital.

Army Calls Men from Camas Control Laboratory

● The control laboratory of Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, Camas, Washington, has been "caught in the draft," to the extent that several of the men of this department have been called into service.

Clayton R. Rudesill, who has been in charge of the converting plant inspection, was called to report at the Quartermaster corps on October 14th. He is a second lieutenant reserve officer and will be stationed at Fort Ord, California.

John C. Meagher, a tester in the Camas laboratory, left October 10th, on an enlistment in the naval air service.

Bernard J. Jacoby, a tester, has been drafted in the army, reporting for service October 14th.

John E. Walkky left September 26th, returning to the University of Washington to complete the requirements for a master of science degree. He has been working as a tester in the control laboratory for the past year.

Maurice Kinsey Visits Shelton

● Dr. Maurice Kinsey, chief chemist, Rayonier Incorporated, Fernandina Division, Fernandina, Florida, recently paid a visit to the company's plant and research laboratory at Shelton, Washington.

Dr. Kinsey was located in Shelton for several years prior to being transferred to Fernandina in 1939 shortly before the start of production.

Second Machine To Start In Early December

● Pacific Paperboard Company, Longview, Washington, is expected to have its second board machine installed and in operation by Thanksgiving or early in December, according to Kenneth Gordon, traffic manager. This five-cylinder, 48-dryer machine installation was about half completed the first of October.

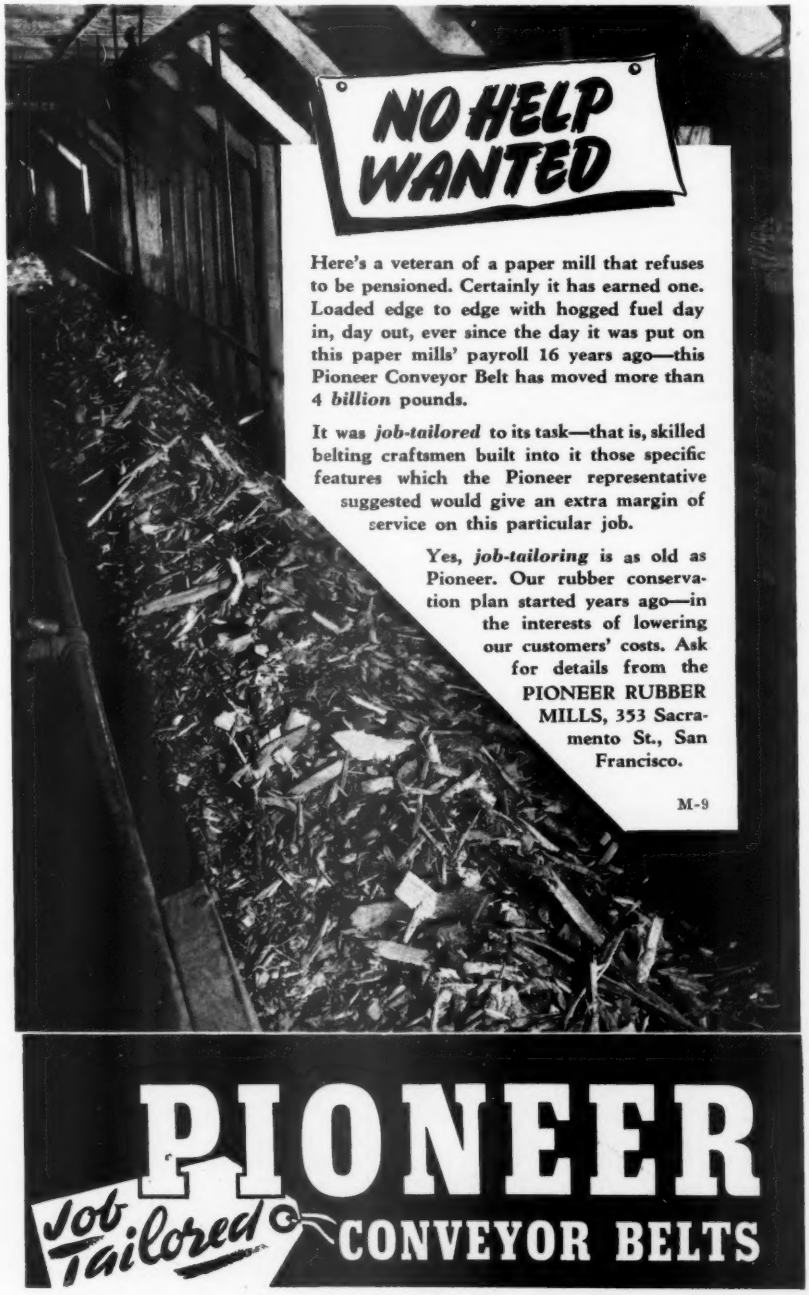
Arnold Maahs Promoted By Pacific Paperboard

● Arnold Maahs, of Pacific Paperboard Company, Longview, Washington, has been promoted from machine tender to assistant boss machine tender, effective the middle of September.

George Spencer Recovers From Auto Accident

● George Spencer, sawmill superintendent, Hawley Pulp and Paper Company, Oregon City, Oregon, was knocked down on the streets of Portland by an automobile, September 1st. He had been visiting at the home of his daughter on Labor Day. During the evening he walked down to the neighborhood store and, on his way home, a car struck and carried him several yards along the street before he fell free.

Fortunately the injuries Spencer sustained were not serious but he was severely shaken and had to have several stitches taken in his forehead, chin and left leg. On September 23rd he returned to his work at the mill.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Here's a veteran of a paper mill that refuses to be pensioned. Certainly it has earned one. Loaded edge to edge with hogged fuel day in, day out, ever since the day it was put on this paper mills' payroll 16 years ago—this Pioneer Conveyor Belt has moved more than 4 billion pounds.
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CONVEYOR BELTS

Joseph McCarthy Joins University of Washington Lignin Research

● Dr. Joseph L. McCarthy who in 1934 obtained his bachelor's degree in chemical engineering at the University of Washington, returned to his alma mater this month to become associated in lignin research with Dr. A. J. Bailey, who is a member of the chemistry staff. The announcement of Dr. McCarthy's appointment was made by Dr. Henry K. Benson, executive officer of the Department of Chemistry and Chemical Engineering.

Since receiving his bachelor's degree at Washington, Dr. McCarthy has devoted the intervening years to cellulose and lignin research. His masters' degree was obtained from the University of Idaho in 1936 following two years of work on wood chemistry on fellowships provided by Potlatch Forests, Inc., of Lewiston, Idaho.

In the Fall of 1936 he went to McGill University in Montreal to work for his doctor's degree in chemistry. This was granted him in 1938 on his thesis, "Bleaching of Kraft Pulp." His work at McGill was supported by fellowships furnished by The Kendall Company of Boston, The Canada Paper Company and the Canadian Pulp & Paper Association. He remained at McGill for three more years, as a sessional lecturer, working with professor Harold Hibbert, head of the Division of Cellulose and Industrial Chemistry. In addition to his teaching he carried on research dealing with lignin, hydrogenation of lignin and other related problems under Dr. Hibbert's direction.

He became associated with the Fraser Companies, Ltd., at Edmunston, New Brunswick, in June, 1940, devoting half his time to organizing a research department and continuing his work at McGill during the other half. He remained as research director for the Fraser Companies until coming to Seattle the first of October.

At the meeting of the American Chemical Society in Atlantic City early last September seven papers were presented of which Dr. Hibbert and Dr. McCarthy were co-authors with seven students at McGill University. Four of these dealt with the hydrogenation of lignin and wood; two reported on the pulping of wood with ethyl alcohol; and, the other paper stated the results of experiments on the conversion of lignin into vanillin and syringaldehyde.

In the latter paper by R. Creighton, Dr. McCarthy and Dr. Hibbert, it was reported that their studies showed the possibilities of converting between 40 and 50 per cent of the weight of lignin in hardwoods into vanillin and syringaldehyde.

Charles A. Newhall Dies in San Jose

● Charles Abbot Newhall, well known in the pulp and paper industry of the Pacific Coast for his chemical research and technical control work, died at his home in San Jose, California on September 9th.

Mr. Newhall was a resident of Seattle for many years and had many friends in the Pacific Northwest. He was born in 1882 and attended the University of California, graduating in 1905 with a B.S. in chemistry and engineering. Later he did special work at the University of Washington including research in electrochemistry.

The early part of his career was spent in the cement industry which he learned thoroughly before turning to development work aimed at improving the qualities of cement. Mr. Newhall developed and placed in commercial production the then new type of Portland cement having very high early strength; the then unknown "three component mix"; and the "iron flux," both of which developments are now widely used in the industry.

This phase of work ended in 1934 when Mr. Newhall opened his own consulting office and testing laboratories. His consulting and testing work embraced a large number of industries, including cement and lime manufacturers; packing houses and food processers; iron and steel producers; electrochemical manufacturers; agricultural spray and fertilizer producers; and pulp and paper mills.

Mr. Newhall's trade promotion work included sulphur, clay and lime products, diatomaceous earth, industrial and agricultural chemicals, pulp and paper. He installed technical control systems and trained operators.

From 1934 until May of 1939 he was associated with the Department of Health Laboratories of the State of Washington as a chemical engineer working on general sanitation, sewage treatment; water supplies; water course purification; pollution abatement; cannery, packing plant and industrial waste treatment and disposal with design and routine operation and control work.

In May of 1939 Mr. Newhall became associated with the Permanente Corporation's cement laboratories as chemist on cement, lime and clay analysis.

Mr. Newhall was active in the preparation of technical articles and in civic affairs. His publications included:Collaborator on 4th edition of Scott's Standard Methods of Analysis; Power Resources of the Pacific Northwest, November, 1931, Chemical and Metallurgical Engineering; Refined Sulphurs, Their Manufacture and Use, American Institute of Chemical Engineers Transactions, 1934; History of the Portland Cement Industry on the Pacific Coast, Concrete Cement Age, April, 1913, and copied in the U. S. Bureau of Mines Mineral Resources for 1912; Disintegration of Concrete in Railway Tunnel Linings, Strength of Highway Surfacings. Effect of Groundwaters on Portland Cement Concrete, all in Pacific Northwest Society of Engineers Proceedings for 1914 and widely copied by technical publications; A Direct Color Test for Soya Bean Oil, Industrial and Engineering Chemistry, March, 1920; Numerous articles in Pacific Pulp & Paper Industry and in the Paper Trade Journal; Articles and reports dealing with sanitation at Grand Coulee Dam and with water purification and sanitation in Washington.

His technical and civic activities included: the American Chemical Society, 1903; American Institute of Chemical Engineers, 1912; American Society for Testing Materials, 1912; American Association of Engineers, 1918; Technical Association of the Pulp and Paper Industry, 1927; Chamber of Commerce Industrial Committee; Engineers Club; Psi Upsilon Fraternity; F. & A. M.; town councilman, two terms; precinct committeeman, ten terms; district chairman; county executive committee, two terms.

Mr. Newhall is survived by his widow, Mrs. Charles A. Newhall of 1543 Burrell Court, San Jose, California, and by one son.

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Camas Bowling League Gets Under Way

● The Crown Willamette Bowling Association of Camas, Washington, inaugurated an eight-team bowling tournament September 15th, which is to be played off in weekly competitions until next May. Bill Whetzel, of the pipe shop, Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, is secretary of the league.

The eight teams and captains are as follows: Paper Makers, Ed Barthelemy; Paper Makers No. 2, H. Robertson; Digesters, Jack Savage; Slave Drivers, Forrest Williams; Slickers, Jim Cregan; Pen Pushers, Oscar Klee; Ink Slingers, Jim Myers; Nuts and Bolts, Frank Sieber.

N. L. Hopkins, manager of the Camas-Washougal Bowling Allies, says this league is the most successful bowling league of the city, in spite of the conflict caused by the various shift operations in the paper mill.

Sid Collier A Proud Father

● A new arrival in the Sidney Collier household is a son and first child, Edwin Sidney, who was born at St. Lukes Hospital on September 17th. The little fellow's proud father is shift foreman at the Puget Sound Pulp & Timber Company's mill in Bellingham, and he reports both mother and baby as doing fine.

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Coast Team Wins TAPPI Golf Trophy

● At the Fall Meeting of TAPPI at Ann Arbor, Michigan, September 16th to 19th, the golf team representing the Pacific Section of TAPPI took the new Hercules Challenge Cup, donated by the Hercules Powder Company.

Members of the winning foursome were: Jack Flynn, Hooker Electrochemical Co., Tacoma; Howard H. Hall, The Dicalite Co., Seattle; Earl G. Thompson, Great Western Division, Dow Chemical Co., Seattle; and Lawrence K. Smith, Pacific Pulp & Paper Industry, Seattle.

The cup has been placed in charge of Alec C. Duncan, manager of the Paper Makers Chemical Division, Hercules Powder Company, Portland, and will be kept on display at the Portland plant until the 1942 Fall Meeting.

Camas Fall Golf Tournament Completed

● Crown Willamette Golf Association, comprised of employees of the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, Camas, Washington, played off its eleventh annual fall tournament, ending September 25th. At that time a dinner meeting was held at the Orchard Hills Golf Club and the trophies presented.

Four 16-man flights participated in the tournament. The winners follow:

First flight—handicap 0 to 9: Cliff Odoms, winderman on No. 9 machine, winner; Bob Barber, runner-up.

Second flight—handicap 10 to 15: Herb Wymore, chemist in the production control lab, winner; John Roberts of the bag factory, runner-up.

Third flight—handicap 16 to 25: Harlyn Scobbs, of Camas production control lab, winner; Walter Rains, of the bag factory, runner-up.

Fourfth flight—handicap 25 to 40: Sprague Yeager, of converting plant office, winner; Tom Martin of production control department, runner-up.

The officers of Crown Willamette Golf Association for 1942 are John Roberts, president; Miles Cady, vice president; and Herb Wymore, secretary-treasurer. Sprague Yeager was elected to the board of directors. The other two members are Jim Shively and J. E. Hanny, resident manager of the Camas plant, who is a permanent member of the board.

Nearly 90% of Camas Employees Sign New Cooperative Insurance

● Nearly 90 per cent of the employees of the Crown Willamette Paper Company Division of Crown Zellerbach Corporation mill at Camas, Washington, have signed up for the new cooperative life and sickness insurance plan which went into effect September 1st.

The new contract is similar to the previous one except that the benefits are greater. The insurance schedule is divided into wage groups. Most male employees fall into the third group, earning between $125 and $150 per month. They receive $1,500 in life insurance and $20 weekly indemnity. The cost is $2.36 per month. All women now fall into the second group, receiving $100 to $125 per month, and pay $1.70 a month for $1,000 insurance and $15 weekly benefits.

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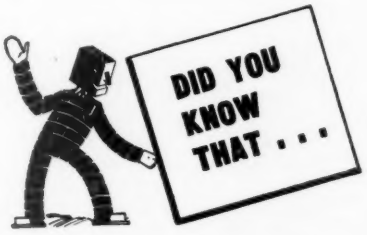

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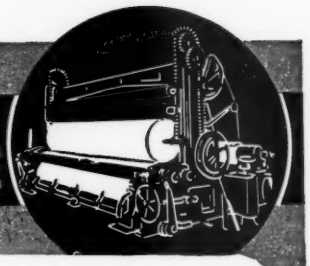

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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of Pacific Pulp & Paper Industry, published monthly at Seattle, Washington, for October 1, 1941.

State of Washington, County of King,—ss.

Before me, a Notary Public in and for the State and county aforesaid personally appeared Miller Freeman, Jr., who, having been duly sworn according to law, deposes and says that he is the treasurer of the Pacific Pulp & Paper Industry, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Miller Freeman, 71 Columbia St., Seattle, Wash.
Editor, Harlan Scott, 71 Columbia St., Seattle, Wash.
Business manager, Lawrence K. Smith, 71 Columbia St., Seattle, Wash.

2. That the owner is:

Consolidated Publishing Co., 71 Columbia St., Seattle, Wash.

(Stockholders) Miller Freeman, Kemper Freeman, Wm. B. Freeman, Miller Freeman, Jr., L. K. Smith, W. E. Crosby, Geo. W. Cain, all of 71 Columbia St., Seattle, Wash.

3. None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds or other securities than as so stated by him.

MILLER FREEMAN, JR., Treasurer.

Sworn to and subscribed before me this 15th day of September, 1941.

G. E. DELAWARE.
(My Commission expires May 20, 1945)

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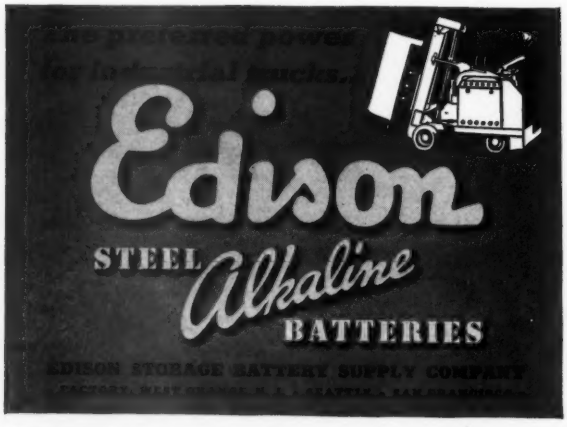

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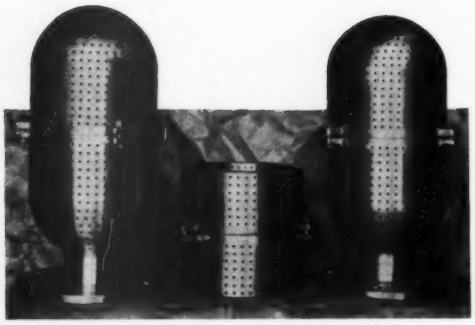

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